U.S. ENVIRONMENTAL PROTECTION AGENCY

TECHNICAL ENFORCEMENT SUPPORT

AT

HAZARDOUS WASTE SITES

TES X
EPA CONTRACT NO. 68-W9-0007
EPA WORK ASSIGNMENT NO. R07047
EPA REGION VII

TRIP REPORT
SOIL SAMPLING
MONSANTO J.F.QUEENY PLANT SITE
ST. LOUIS, MISSOURI

METCALF & EDDY
10502 NW AMBASSADOR DRIVE, SUITE 210
KANSAS CITY, MISSOURI 64153

PREPARED BY
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JACOBS PROJECT NO. 13-E082-00

MARCH 1994

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1.0 INTRODUCTION

During the period March 7 through March 11, 1994, Jacobs Engineering Group Inc. (Jacobs) representative, Bill Gresham, was present at the Monsanto J.F. Queeny facility (Monsanto) in St. Louis, Missouri. The purpose of this visit was to perform oversight and obtain split soil samples on behalf of the U.S. Environmental Protection Agency (EPA). These procedures were performed by representatives of Geraghty & Miller, Inc. Environmental Services (G&M), which is Monsanto's contractor. Subcontracted Geoprobe™ services were performed by GeoTrace, Inc. (GTI). Jacobs, subcontractor to Metcalf & Eddy, Inc. (M&E), under the Technical Enforcement Support (TES) X Contract (No. 68-W9-0007), performed the work as part of Work Assignment No. R07047.

2.0 PROJECT DESCRIPTION

2.1 Site Background

The Monsanto facility is located on a 63-acre site in St. Louis, Missouri (Figure 1). The site is located approximately 500 to 800 feet west of the Mississippi River in a heavily populated and industrialized area accessible to interstate highways and large railroad centers.

This plant began manufacturing in 1902. Over 200 different products, in over 800 different forms, have been manufactured here. Its major product families have included process chemicals, such as maleic anhydride, fumaric acid, trichlorocarbanilide (TCC), toluene sulfonic acid, and nitrophenetole; plasticizers, such as phthalate esters and toluene sulfonamides; synthetic functional fluids such as pydrauls, skydrols, and coolanols; food and fine chemicals such as salicylic acid, aspirin, methyl salicylate, benzoic acid, and ethavan; and agricultural chemicals such as Lasso™.

Previous investigations at the site began in 1983 with a plant-wide hydrogeologic investigation that included installation of sixteen (16) monitoring wells. In 1984, twelve (12) additional monitoring wells were installed plant-wide. Organic compounds were detected in several groundwater monitoring wells. In 1985, eight (8) soil borings and three (3) monitoring wells were installed near Building FF. A nonaqueous phase liquid (NAPL) was detected in two (2) of the monitoring wells (MW-14 and VW-2). Four (4) recovery wells were installed near Building FF to recover the tetrachloroethylene (PCE) and reduce the extent of contamination.

In 1986, Monsanto changed environmental consultants from Environmental Science & Engineering, Inc. (ESE) to G&M, who initiated investigation of the NAPL detected in monitoring well MW-14, located northeast of the Lasso™ production and railcar unloading area. Five (5) soil borings and five (5) monitoring wells were installed in the Lasso™ production area to determine the areal and vertical extent of contamination. Organic compounds associated with Lasso™ production were detected in all five (5) newly installed monitoring wells, including NAPL in MW-14. In April 1988, G&M conducted two (2) additional subsurface investigations at the coal storage yard and at the former bulk chemical terminal. Twelve (12) soil borings and five (5) monitoring wells were installed. Results from this investigation indicated that volatile organic compounds (VOC) were detected in overlying fill material at the former bulk chemical terminal and at the coal storage yard. In March 1992, G&M submitted a Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) Report which characterized the vertical and horizontal extent of contamination in groundwater and soil. The RFI Report concluded that the contamination present at the site did not pose a significant health risk to the public. In May and June of 1993, O'Brien & Gere Engineers, Inc. (O&G) conducted an investigation of the soil and groundwater associated with former Building FF, which had been demolished in 1992. A report detailing this investigation was submitted in July 1993. This report indicates that the subsurface soil and groundwater in the vicinity of former Building FF have been impacted by VOCs. In August 1993, O&G submitted an RFI Phase II Work Plan to address data gaps that remained following the initial RFI efforts. In November 1993, G&M performed a groundwater sampling event in conjunction with Phase II of the RFI.

2.2 Objectives

The purpose of the oversight performed by Jacobs was to observe the activities associated with the soil sampling at the facility, and to obtain split samples of a portion of the soil samples collected by the facility. Oversight of field activities was performed to document Monsanto's compliance, along with that of its contractor, G&M, with approved procedures in the RFI Phase II Work Plan. Split samples were obtained by Jacobs and analyzed by the EPA Region VII Laboratory to check the accuracy of Monsanto's sample preservation, management, and laboratory analysis, as performed by Monsanto (for PCB screening samples) and Savannah Laboratories of Savannah, Georgia (all other samples). Subcontract work on the Geoprobe™ sampling effort, performed by GTI of Mt. Vernon, Illinois, was observed as well. Split samples of Geoprobe™ soil samples were obtained in several cases.

3.0 FIELD ACTIVITIES

3.1 Introduction

During the oversight period (March 7 through March 11, 1994), the Jacobs representative observed soil sampling throughout the site, which was implemented in order to better define the nature and extent of contaminants of interest. This work was necessitated as a result of data gaps that remained following the initial RFI efforts. Refer to Attachment A for Photographs, Attachment B for Field Log Notes, and Attachment C for Chain of Custody/Field Sheets.

The Jacobs representative arrived at the site on March 7, 1994 and proceeded directly to the reception area, where the Monsanto and G&M representatives met him. A safety briefing was conducted for the benefit of all non-plant personnel (Monsanto, G&M, and Jacobs). Following this safety briefing and initial container and equipment preparation, sampling personnel proceeded to the VV Area, where soil sampling locations were set up and Geoprobe™ soil sampling activities were initiated. A total of eighty-four (84) locations were sampled during the Jacobs oversight period. Table 1 presents a summary of sampling conducted during this period.

Site personnel, their affiliation, and time on-site (as it relates to the events described herein) during the period of oversight by Jacobs are as follows:

Name	Organization	Date
Jo Hanson	Monsanto	March 7,9-11, 1994
Rich Koenig	Monsanto	March 7-11, 1994
Troy Harlan	Monsanto	March 7-11, 1994
Alan Faust	Monsanto	March 11, 1994
Laurie Musiker	G&M	March 7-10, 1994
Jamie Yater	G&M	March 7-11, 1994
John Upcraft	GTI	March 7,8,10,11, 1994
Mike Chenoweth	GTI	March 7-11, 1994
Brian Barrett	GTI	March 9-11, 1994
Bill Gresham	Jacobs	March 7-11, 1994

3.2 General Site Conditions and Observations

Weather conditions during the oversight period were clear to cloudy, breezy and cool, with morning temperatures starting at about 35°F and afternoon highs reaching between approximately 40°F and 60°F. Light rain fell on March 7. No precipitation fell during the remainder of the period, and ground conditions were dry.

3.3 Oversight of Geoprobe™ Soil Sampling

The following is a description of the manner in which the Geoprobe™ work was performed. Following set-up of one of GTI's Geoprobe™ vans (Ford cargo vans outfitted with hydraulic drive mechanisms at the rear) at a given location, a sealed stainless steel Probe-Drive sampler was pushed or driven to the desired sampling depth. Inside the sampler, a clear, bis (2-ethylhexyl) phthalate sleeve held the soil sample following retrieval of the sampler. The sample inside this sleeve was then logged and discrete-depth samples were collected by cutting the sleeve open.

Original plans called for sixteen (16) Geoprobe™ sampling locations around the Lasso™ Area, three (3) locations around MW-13, three (3) in the vicinity of MW-20, four (4) in the Former Quarry Area, eight (8) in the Former Bulk Chemical Storage Area, four (4) in the Building KK Area, three (3) at the Former Coal Storage Yard, and three (3) background locations. In addition, a variable number of sampling locations were planned around the Building VV Area and the Boiler Slag Accumulation Pad. Of these, soil samples were actually collected at thirty-three (33) locations around the VV Area, ten (10) locations around the Boiler Slag Accumulation Pad, and fifteen (15) locations around the Lasso™ Area. In the remaining areas, the planned number of locations were actually sampled. Table 1 indicates that one (1) location was sampled adjacent to MW-13, compared to three (3) planned locations. Two (2) of the Former Quarry Area locations (QP-3 and QP-4) were counted toward the location requirement at MW-13. At the Building VV Area and Boiler Slag Accumulation Pad, the number of samples was variable due to unknown underground obstructions and the fact that PCB screening was to be performed on a sample from each initial location. Following this initial screening (performed at Monsanto's St. Louis analytical facility), further locations were chosen to allow for PCB delineation. Delineation was to be considered complete when two geographically consecutive samples had been collected for which screening analysis revealed PCB concentrations of less than or equal to 25 parts per million (ppm). Following the collection of the screening samples, four samples were collected each from the Building VV Area and the Boiler Slag Accumulation Pad for laboratory analysis of PCBs. Three of each of these samples were collected from the perimeters of the delineated areas, and the fourth was collected from the location of the screened sample with the highest screened sample value. Following lateral delineation, deeper samples were collected at a number of locations for PCB analysis. No soil samples were collected below the water table.

The Geoprobe™ was also utilized to determine depth to bedrock below ground surface (bgs) at the Former Quarry Area. Following the collection of samples at each of the four (4) sampling locations at the Former Quarry Area, the Geoprobe™ sampler was pushed to refusal. Table 3 presents the results of this effort. It should be noted that at one location (QP-2), a satisfactory bedrock depth was not determined, due to mechanical problems which resulted in the loss of five (5) Geoprobe™ sampler rods and damage to several others.

Table 1 details sites monitored, number of sample locations, analyses, and preservation used for Monsanto's and EPA's samples from each sampling location. Jacobs obtained split samples from each of the areas except for the MW-13 area. Table 2 presents a summary of the samples obtained as splits for EPA. All sample containers were filled to near capacity. Each forty-milliliter (40-ml) vial for VOC analysis (for EPA) was filled as completely as possible, to ensure that no headspace would be present in the container. The samples were placed into coolers with ice for preservation. Following proper chain-of-custody procedures, the coolers designated to go to Savannah Laboratories were shipped via Federal Express overnight service to ensure receipt and analysis within the prescribed holding times. Split samples obtained by Jacobs were packaged following standard sample-handling protocols and conveyed (by commercial courier and in person) to the U.S. EPA Region VII Laboratories in Kansas City, Kansas. Those sample collection activities observed were performed generally in compliance with the G&M RFI Phase II Work Plan for the J.F. Queeny Site, Monsanto Company, St. Louis, Missouri, dated August 1993, except as noted in Section 8.0 below.

3.4 Field Measurements

Health and safety monitoring was performed through the use of an HNu photoionization detector with a 10.2 electron-volt (eV) lamp. This measurement was made at each sampling location, except for a few the first day, when the HNu malfunctioned. This particular instrument was replaced on the second day of sampling following a call by G&M to Hazco, the provider of the HNu. The HNu was calibrated with 100 parts per million (ppm) isobutylene gas at the start of each sampling day, and background was set at zero.

3.5 Daily Activities and Major Accomplishments

March 7, 1994

The Jacobs representative arrived at the site. G&M, GTI, and Monsanto personnel were already present. Following attendance of a safety briefing, performance of soil sampling commenced, with samples at twenty (20) locations (VP-1 through VP-20) in the VV Area collected. Split samples were obtained at two (2) locations (VP-6 and VP-11) for EPA. At location VP-11, a duplicate sample was also obtained.

March 8, 1994

Soil sampling was performed at eight (8) locations (VS-5 through VS-12) at the Former Bulk Chemical Storage Terminal, ten (10) locations (BP-1 through BP-10) at the Boiler Slag Accumulation Pad and three (3) locations (GP-20-A, GP-20-B, and GP-20-C) adjacent to MW-20. Split samples were obtained at two (2) locations (VS-12-M and VS-11-S) at the Former Bulk Chemical Storage Terminal, and at one (1) location each at the Boiler Slag Accumulation Pad (BP-4) and adjacent to MW-20 (GP-20-AS) for EPA. A duplicate sample was obtained at location VS-11-S as well.

March 9, 1994

Soil sampling was performed at thirteen (13) locations (AC-1, AC-2, AC-3, AC-5 through AC-8, and AC-10 through AC-15) at the Lasso™ Area. Sampling was not completed at location AC-4 due to obstructions encountered during two attempts to advance the sampler. Soil sampling was also performed at one location adjacent to MW-13. Four (4) locations at the Former Quarry Area were sampled. Following sample collection, the Geoprobe™ sampler was pushed to bedrock refusal at all but one of the four Former Quarry Area locations. At location QP-2, two attempts failed to encounter bedrock refusal. The sampler varied from vertical orientation on both attempts, resulting in bent sampler rods and loss of five (5) of the rods. Split samples were obtained at both the Lasso™ Area (AC-1-S, AC-1-D, AC-3-S, AC-5-S, AC-8-S, AC-8-M, AC-8-D, and AC-13-M) and the Former Quarry Area (QP-1-S, QP-2-M, and QP-2-D) for EPA. Duplicate samples were obtained at locations AC-1-D and AC-13-M) as well.

March 10, 1994

Geoprobe™ soil sampling was performed at three (3) locations (HB-2-GP, HW-2-GP, and HW-3-GP) at the Former Coal Storage Yard, nine (9) locations (VP-21 through VP-29) at the VV Building, four (4) locations (KP-1 through KP-4) at the KK Area, one (1) location (AC-9) at the Lasso™ Area, and three background locations (BG-1, BG-2 and BG-3). Split samples were obtained at the Former Coal Storage Yard (HW-2-GP), the KK Area (KP-2-S and KP-2-M), and one of the background locations (BG-2) for EPA. A duplicate sample was obtained at location KP-2-S as well.

March 11, 1994

Geoprobe™ conducted a demonstration of logging capabilities. Another attempt to push the Geoprobe™ sampler to bedrock refusal at Former Quarry Area location QP-2 failed, as the sampler again varied from vertical orientation and the attempt was aborted. Further sampling at four (4) locations (VP-30 through VP-33) at the VV Area was performed. A split sample for EPA was obtained from VV Area sampling (location VP-30). All contractor personnel (G&M, GTI, Geoprobe™, and Jacobs) demobilized from the site.

4.0 SAMPLE HANDLING, CUSTODY, AND DOCUMENTATION PROCEDURES

Preservation, sample handling, and documentation of the soil samples collected by G&M personnel during the presence of the Jacobs representative were performed in accordance with standard accepted procedures and with those procedures set forth in the RFI Phase II Work Plan submitted by Monsanto in August, 1993. Standard procedures were used to preserve, manage, and convey samples obtained by the Jacobs representative on behalf of EPA as well. Each sample was assigned a unique number for tracking and identification. Chain of custody protocols were followed by both parties. Table 1 provides a comparison of the containers and preservation of samples practiced for Monsanto and EPA samples.

5.0 SITE SAFETY

Activities performed by Monsanto, G&M, and GTI were governed by company-specific Health and Safety Plans. The Jacobs representative adhered to the Jacobs Health and Safety Plan. Modified level D personal protective equipment (PPE) was utilized by all on-site personnel. This consisted of disposable gloves, steel-toed boots, safety glasses, hard hats, and street clothes.

6.0 DECONTAMINATION PROCEDURES

6.1 Equipment Decontamination

6.1.1 Geoprobe™ Equipment

The rods utilized in Geoprobe™ advancement were decontaminated by GTI personnel at the conclusion of each workday by steam-cleaning at GTI's decontamination facility located at its Mt. Vernon, Illinois office. The high-pressure wash was enhanced through the use of Liquinox™ nonphosphate soap. Following a tap water rinse, each rod was again rinsed with de-ionized water.

6.1.2 Other Equipment

Sampling equipment, such as steel-bladed utility knives (which were used to cut open the sample sleeves), was decontaminated prior to and/or following each use with a wash in a solution of Alconox™ in potable water followed by a distilled water rinse.

6.2 Personnel Decontamination

Personnel decontamination consisted of washing hands following removal of disposable vinyl and nitrile gloves used when potentially contaminated material was encountered.

7.0 RESIDUALS MANAGEMENT

Fluids generated through equipment decontamination (other than the steam-cleaning-generated fluids) were discharged onto the ground.

Solid investigation-derived waste (IDW), such as used PPE, was bagged and left on-site for disposal as outlined in the approved RFI Phase II Work Plan. Monsanto personnel indicated that this material would be drummed and shipped to an incinerator. The solid IDW generated by the Jacobs representative was combined with that generated by Monsanto, G&M, and GTI personnel.

8.0 DEVIATIONS FROM APPROVED PLANS

Few deviations from the procedures outlined in the approved RFI Phase II Work Plan were noted by the Jacobs representative during oversight activities. Exceptions are noted below.

At one of the Former Quarry Area locations (QP-2), bedrock refusal was not encountered as planned, due to difficulties with the Geoprobe™ equipment at this location, as described in Sections 3.3 and 3.5 above. Also see Table 3.

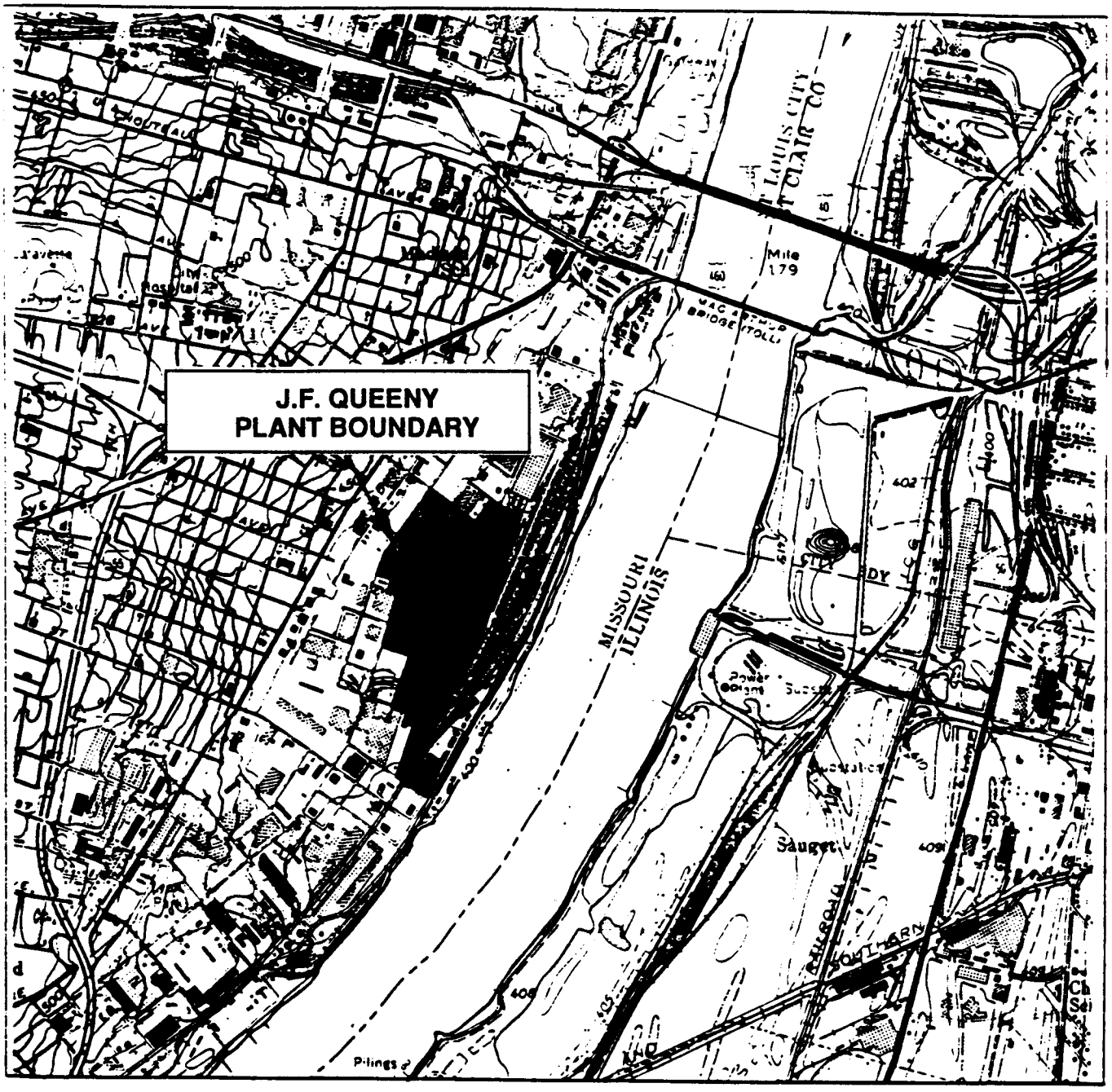
Sampling was not conducted at location AC-4 (Lasso™) due to obstructions encountered on two attempts at Geoprobe™ sampler advancement.

9.0 SUMMARY AND CONCLUSIONS

Jacobs maintained a site presence at Monsanto during the period March 7 - March 11, 1994. While on-site, the Jacobs representative performed oversight of soil sampling activities, at locations throughout the site, as outlined in the above text.

It is Jacobs conclusion that the work performed by Monsanto, G&M, and GTI personnel during this period conformed with the procedures outlined in applicable site guidance, except as noted above.

FIGURES



Source: U.S.G.S. Topographic Map

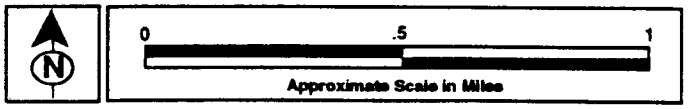


FIGURE DESCRIPTION: SITE LOCATION MAP		
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JACOBS ENGINEERING GROUP INC.		TES X
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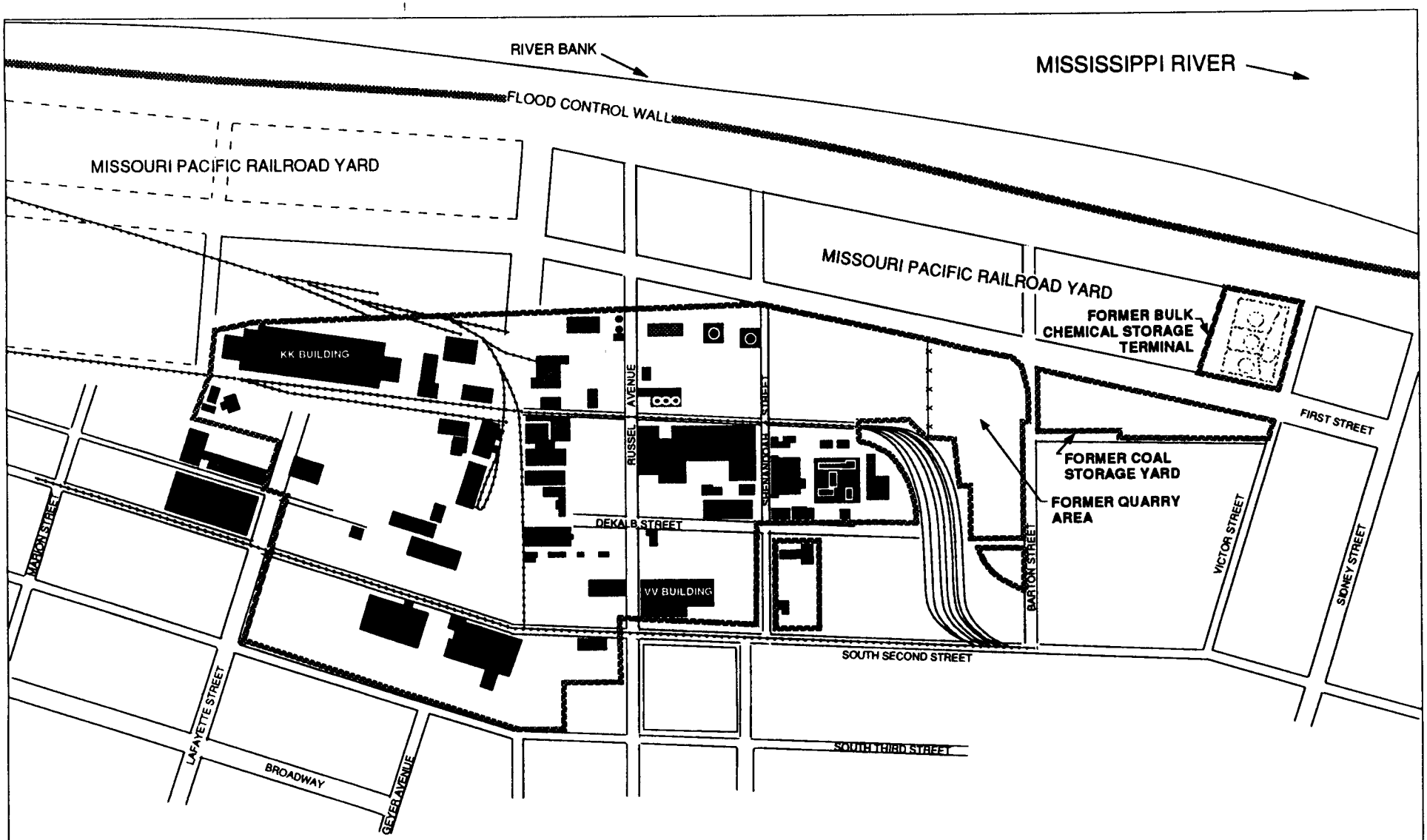
CHECKED BY: BJ	DATE: 11/23/93	

E082-00-002



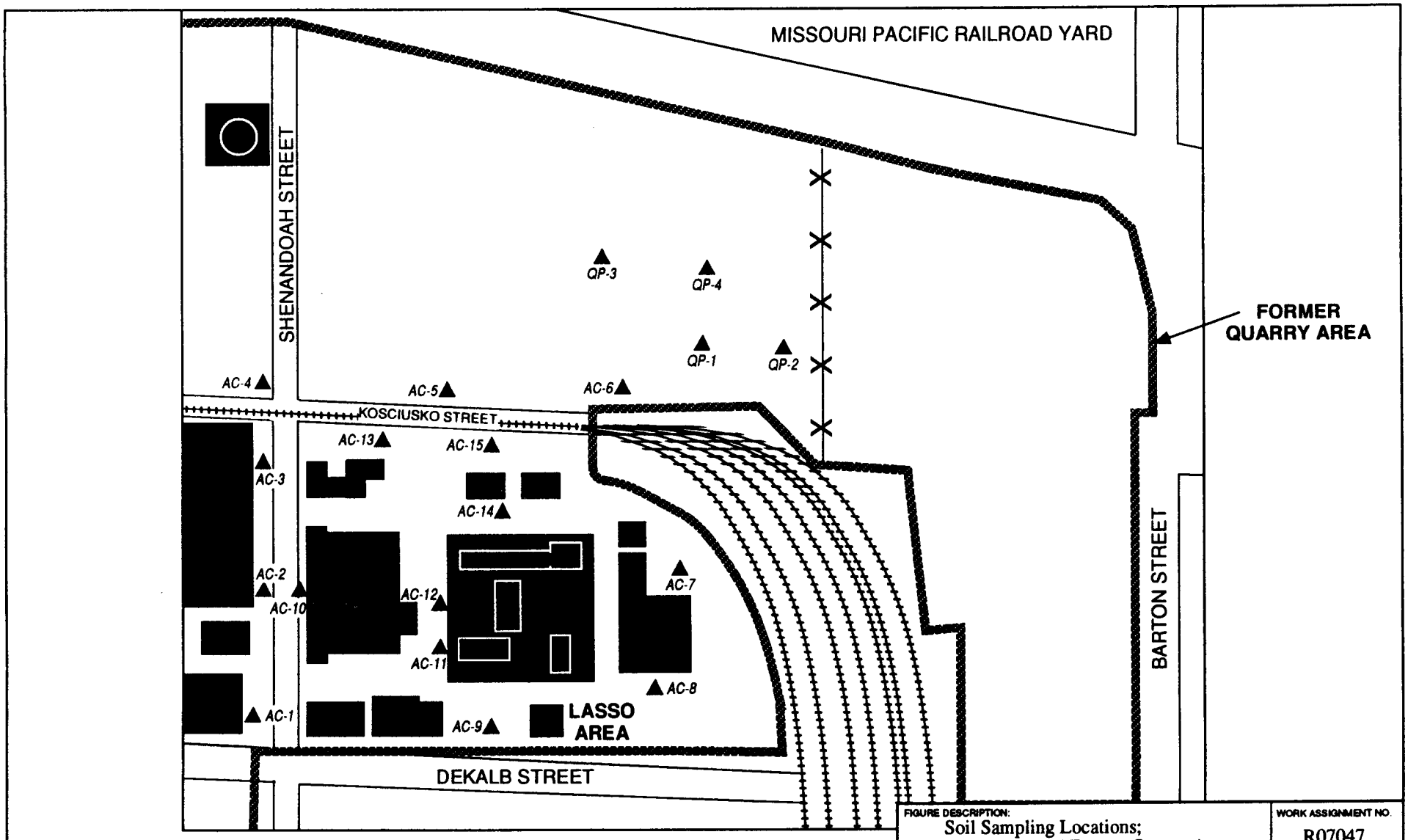
LEGEND

SITE BOUNDARY

NOT TO SCALE

FIGURE DESCRIPTION: SITE MAP	WORK ASSIGNMENT NO: R07047
SITE NAME: MONSANTO - J.F. QUEENY PLANT ST. LOUIS, MISSOURI	JACOBS PROJECT NO: 13-E082-00
JACOBS ENGINEERING GROUP INC.	TES X
DRAWN BY: MD/DJK DATE: 02/28/93	FIGURE NO: 2
CHECKED BY: BG DATE: 02/28/93	

E082-00-001



LEGEND

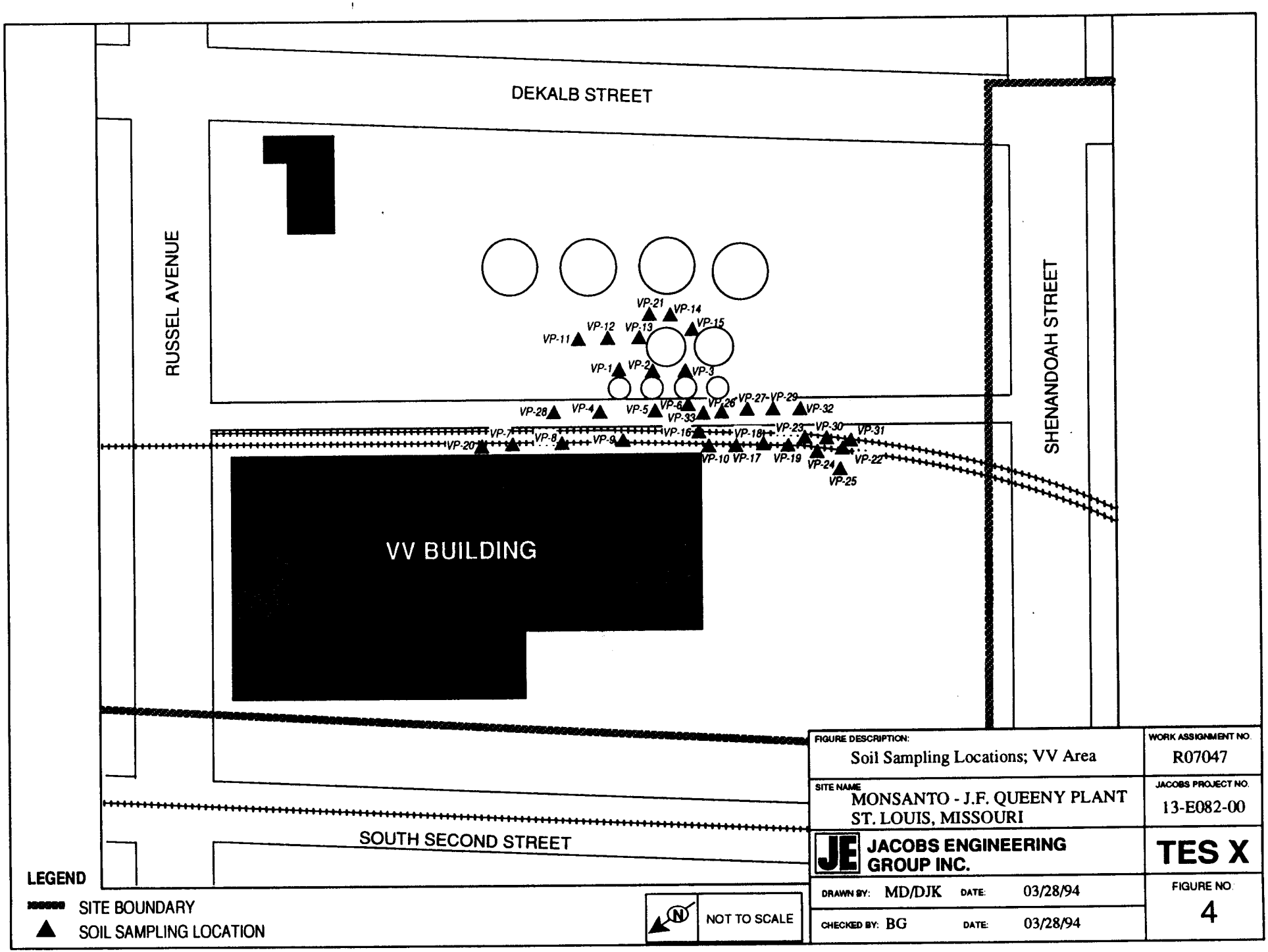
SITE BOUNDARY

SOIL SAMPLING LOCATION

NOT TO SCALE

FIGURE DESCRIPTION: Soil Sampling Locations; Lasso Area and Former Quarry Area	WORK ASSIGNMENT NO. R07047
SITE NAME: MONSANTO - J.F. QUEENY PLANT ST. LOUIS, MISSOURI	JACOBS PROJECT NO. 13-E082-00
JACOBS ENGINEERING GROUP INC.	TES X
DRAWN BY: MD/DJK DATE: 03/28/94	FIGURE NO. 3
CHECKED BY: BG DATE: 03/28/94	

E082-00-004


DEKALB STREET
RUSSEL AVENUE
SHENANDOAH STREET
SOUTH SECOND STREET
VV BUILDING
VP-1
VP-2
VP-3
VP-4
VP-5
VP-6
VP-7
VP-8
VP-9
VP-10
VP-11
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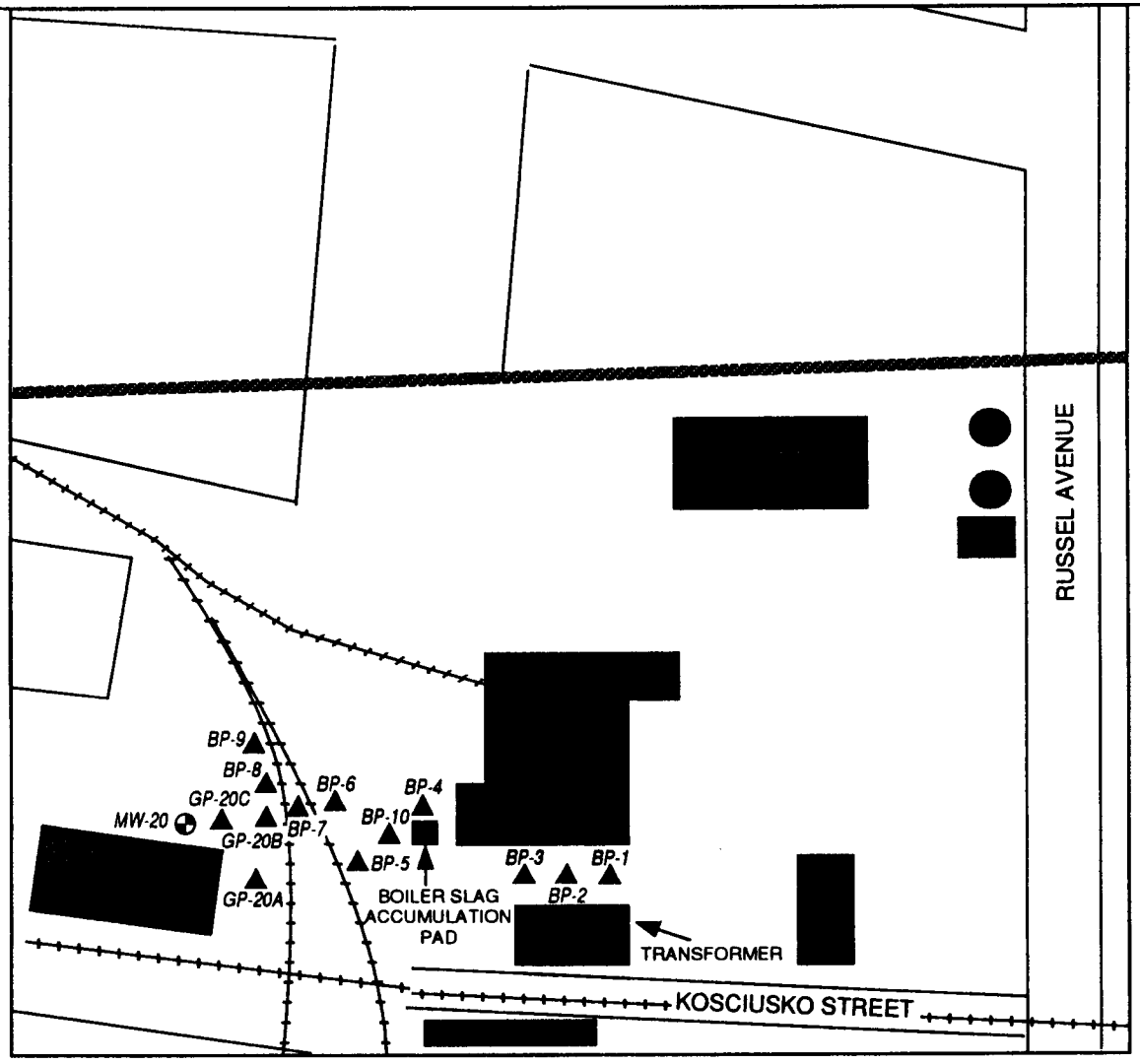
VP-29
VP-30
VP-31
VP-32
VP-33
LEGEND
SITE BOUNDARY
SOIL SAMPLING LOCATION
N
NOT TO SCALE
FIGURE DESCRIPTION:
Soil Sampling Locations; VV Area
WORK ASSIGNMENT NO.
R07047
SITE NAME
MONSANTO - J.F. QUEENY PLANT
ST. LOUIS, MISSOURI
JACOBS PROJECT NO.
13-E082-00
JACOBS ENGINEERING GROUP INC.
TES X
DRAWN BY: MD/DJK DATE: 03/28/94
CHECKED BY: BG DATE: 03/28/94
FIGURE NO.
4

E082-00-005



LEGEND

- SITE BOUNDARY
- MONITORING WELL OR OBSERVATION WELL
- SOIL SAMPLING LOCATION

NOT TO SCALE

FIGURE DESCRIPTION: Soil Sampling Locations; Boiler Slag Accumulation Pad/MW-20 Area	WORK ASSIGNMENT NO.: R07047
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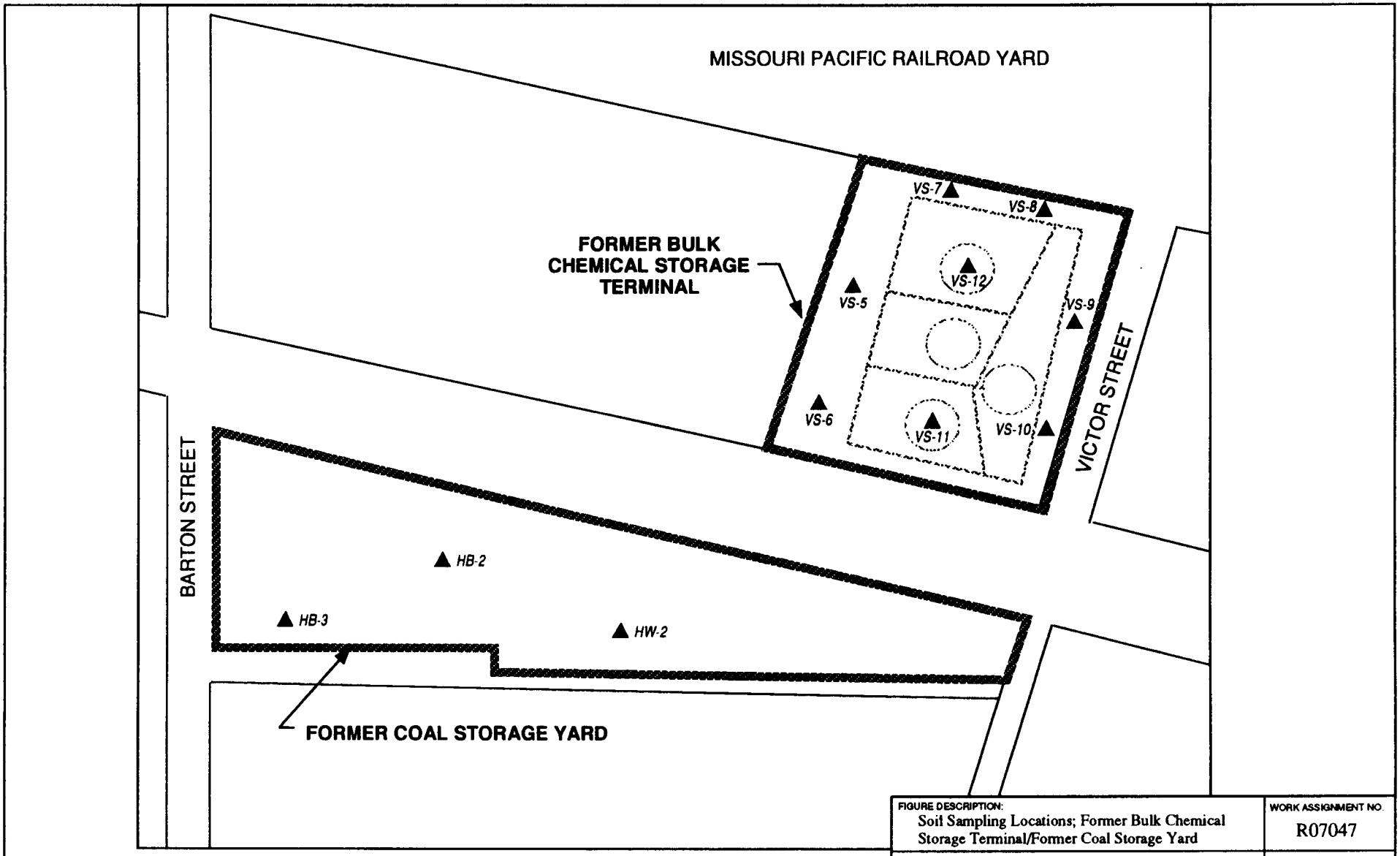
JACOBS ENGINEERING GROUP INC.	TES X
DRAWN BY: MD/DJK DATE: 03/28/94	FIGURE NO.: 5
CHECKED BY: BG DATE: 03/28/94	

E082-00-006



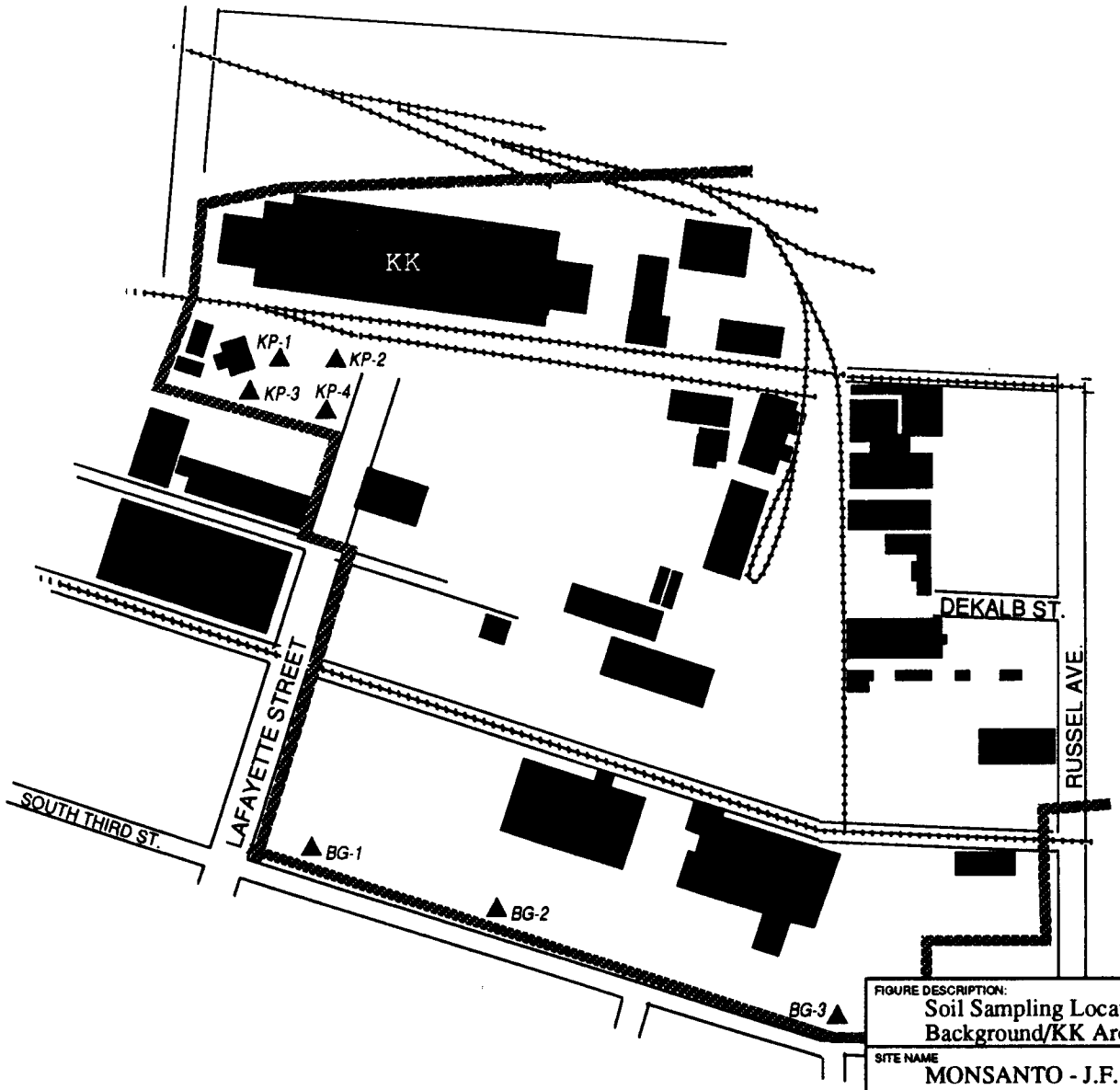
LEGEND

- SITE BOUNDARY
- ▲ SOIL SAMPLING LOCATION

N — NOT TO SCALE

FIGURE DESCRIPTION: Soil Sampling Locations; Former Bulk Chemical Storage Terminal/Former Coal Storage Yard	WORK ASSIGNMENT NO. R07047
SITE NAME: MONSANTO - J.F. QUEENY PLANT ST. LOUIS, MISSOURI	JACOBS PROJECT NO. 13-E082-00
JACOBS ENGINEERING GROUP INC.	TES X
DRAWN BY: MD/DJK DATE: 03/28/94	FIGURE NO. 6
CHECKED BY: BG DATE: 03/28/94	

E082-00-003



LEGEND

SITE BOUNDARY

▲ SOIL SAMPLING LOCATION

NOT TO SCALE

FIGURE DESCRIPTION: Soil Sampling Locations; Background/KK Area	WORK ASSIGNMENT NO. R07047
SITE NAME MONSANTO - J.F. QUEENY PLANT ST. LOUIS, MISSOURI	JACOBS PROJECT NO. 13-E082-00
JACOBS ENGINEERING GROUP INC.	TES X
DRAWN BY: MD/DJK DATE: 03/28/94	FIGURE NO. 7
CHECKED BY: BG DATE: 03/28/94	

E082-00-007

TABLES

TABLE 1

SITES MONITORED, SAMPLE SUMMARY

	Monsanto			EPA		
Site Monitored	Analyses	Preservation	Number of Locations*	Analyses	EPA Preservation	Number of Split Samples
Former Acetanilides/Railcar Unloading Area (Lasso™ Area)	Alachlor	cool	7	Alachlor	cool	1, plus 1 dup
Former Acetanilides/Railcar Unloading Area (Lasso™ Area)	Alachlor, VOCs	cool	8	Alachlor, VOCs	cool	7, plus 1 dup
Former Quarry	SVOCs, Metals	cool	4	SVOCs, VOCs, Alachlor, Metals	cool	3
Former Bulk Chemical Storage Terminal	SVOCs, VOCs, Metals, Sulfide	cool	8	SVOCs, VOCs, Alachlor, Sulfide	cool 1N zinc acetate (for sulfide)	2, plus 1 dup
Boiler Slag Accumulation Pad	PCBs, Metals	cool	10	PCBs, Metals	cool	2
Well MW-13 Area	SVOCs	cool	1	-----	-----	-----
Well MW-20 Area	Cyanide	cool	3	Cyanide	cool	1
Building KK Area	VOCs	cool	4	VOCs	cool	2, plus 1 dup
Former Coal Storage Yard	VOCs	cool	3	VOCs	cool	1
Building VV Area	PCBs	cool	33	PCBs	cool	3, plus 1 dup
Background Location	Metals	cool	3	Metals	cool	1

* One to three samples were collected per location depending on depth to groundwater

TABLE 2

EPA SPLIT SAMPLES

EPA Sample Number	Monsanto Location Designation	Parameters Analyzed	Sampling Date
ARD53-001	AC-1-S	VOCs, Alachlor	March 9, 1994
ARD53-002	AC-3-S	VOCs, Alachlor	March 9, 1994
ARD53-003	AC-5-S	VOCs, Alachlor	March 9, 1994
ARD53-004	AC-8-S	VOCs, Alachlor	March 9, 1994
ARD53-005	AC-8-M	VOCs, Alachlor	March 9, 1994
ARD53-006	AC-8-D	VOCs, Alachlor	March 9, 1994
ARD53-012	AC-1-D	VOCs, Alachlor	March 9, 1994
ARD53-012-D	AC-1-D	VOCs, Alachlor	March 9, 1994
ARD53-014	AC-13-M	Alachlor	March 9, 1994
ARD53-014-D	AC-13-M	Alachlor	March 9, 1994
ARD53-016	QP-1-S	VOCs, Semivolatiles, Alachlor, Metals	March 9, 1994
ARD53-017	QP-2-M	VOCs, Semivolatiles, Alachlor, Metals	March 9, 1994
ARD53-018	QP-2-D	VOCs, Semivolatiles, Alachlor, Metals	March 9, 1994
ARD53-019	QP-12-M	VOCs, Semivolatiles, Alachlor, Sulfide	March 8, 1994
ARD53-020	VS-11-S	VOCs, Semivolatiles, Alachlor, Sulfide	March 8, 1994
ARD53-020-D	VS-11-S	VOCs, Semivolatiles, Alachlor, Sulfide	March 8, 1994
ARD53-026	BP-4	Metals, PCBs	March 8, 1994
ARD53-027	GP-20-AS	Metals, PCBs	March 8, 1994
ARD53-028	VP-6	PCBs	March 7, 1994
ARD53-029	VP-11	PCBs	March 7, 1994
ARD53-029-D	VP-11	PCBs	March 7, 1994
ARD53-031	VP-30	PCBs	March 11, 1994
ARD53-044	GP-20-CS	Cyanide	March 8, 1994
ARD53-046	HW-2-GP	VOCs	March 10, 1994
ARD53-047	KP-2-S	VOCs	March 10, 1994
ARD53-047-D	KP-2-S	VOCs	March 10, 1994
ARD53-049	KP-2-M	VOCs	March 10, 1994
ARD53-051	BG-2	Metals	March 10, 1994

TABLE 3

DEPTH TO BEDROCK AT THE QUARRY AREA

Location	Depth to Bedrock (feet bgs)
QP-1	58.1
QP-2	*
QP-3	18.5
QP-4	33.2

Notes:

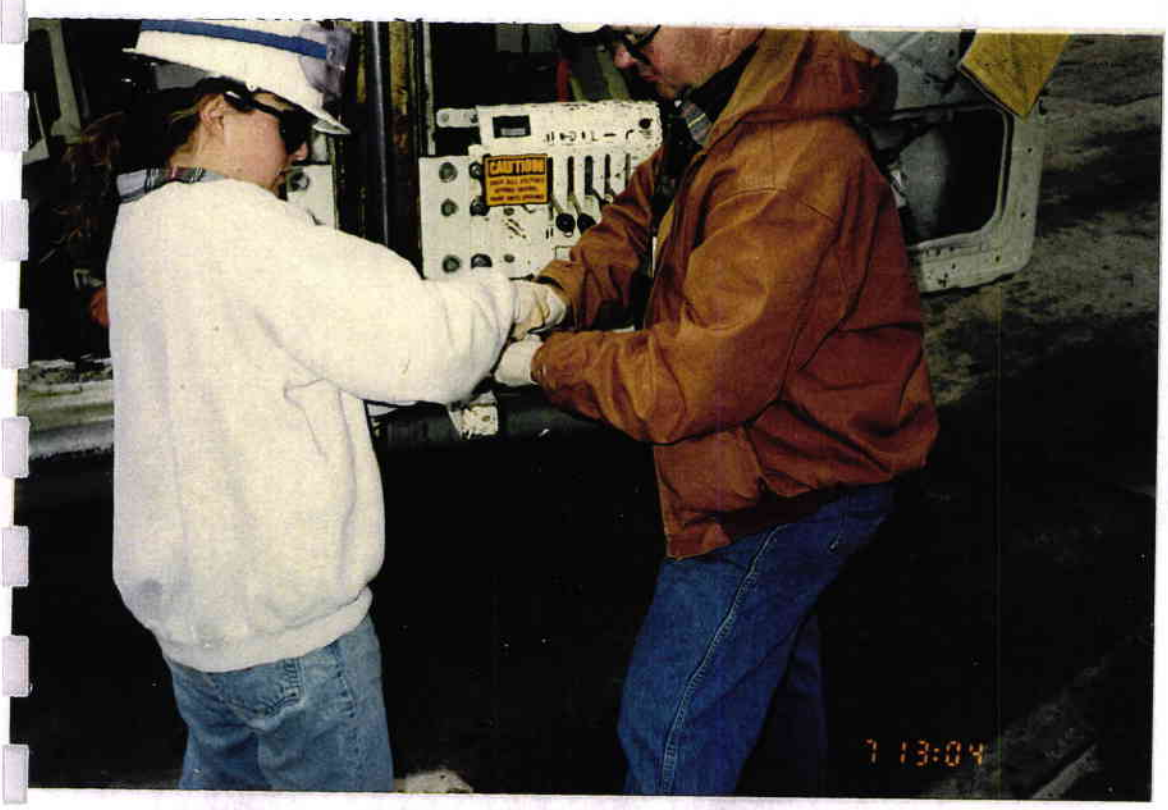
Geoprobe™ sampler pushed to refusal

* Three attempts did not yield satisfactory refusal. The sampler continued to vary from vertical orientation, resulting in bent sampler rods after reaching approximately 48 feet bgs.

ATTACHMENTS

ATTACHMENT A

Photographs



PHOTOGRAPH NO. 1

Date: March 7, 1994
Time: 1310
Photographer: Bill Gresham
Direction of Photograph: Northwest

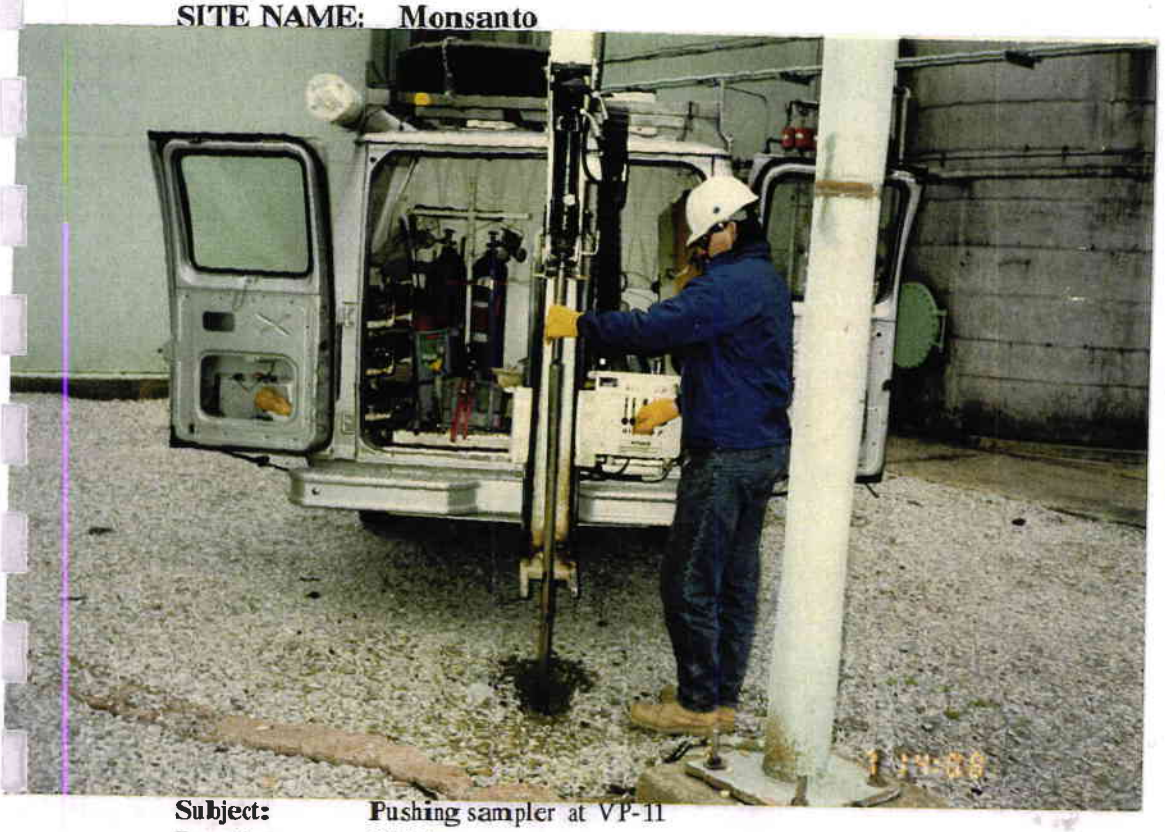
Subject: Collection of soil sample at VP-4
Location: VW Area

PHOTOGRAPH NO. 2

Date: March 7, 1994
Time: 1350
Photographer: Bill Gresham
Direction of Photograph: Southwest

Subject: GTI personnel collecting soil sample at VP-11
Location: VW Area

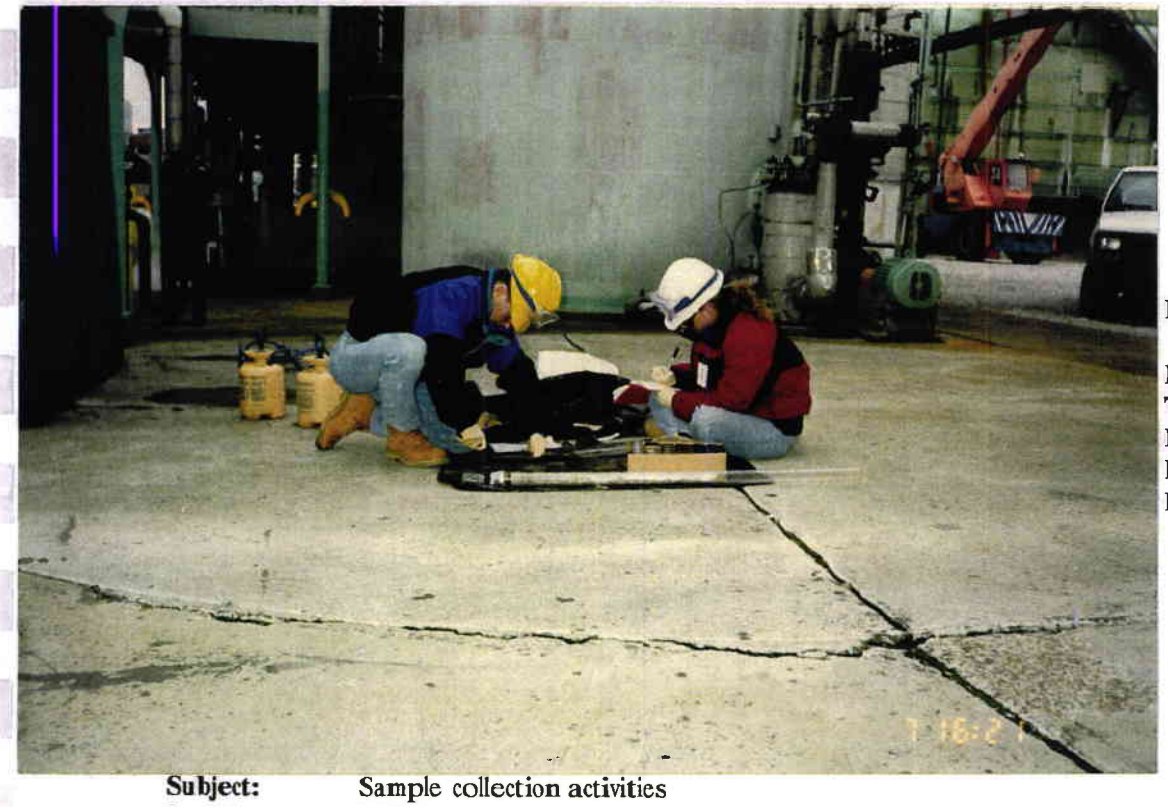
SITE NAME: Monsanto



PHOTOGRAPH NO. 3

Date: March 7, 1994
Time: 1415
Photographer: Bill Gresham
Direction of Photograph: Southwest

Subject: Pushing sampler at VP-11
Location: VV Area



PHOTOGRAPH NO. 4

Date: March 7, 1994
Time: 1630
Photographer: Bill Gresham
Direction of Photograph: North

Subject: Sample collection activities
Location: VV Area

SITE NAME: Monsanto

PHOTOGRAPH NO. 5

Date: March 8, 1994
Time: 1045
Photographer: Bill Gresham
Direction of Photograph: East

Subject: G&M and Monsanto personnel sampling VS-11
Location: Former Bulk Chemical Storage Area

PHOTOGRAPH NO. 6

Date: March 8, 1994
Time: 1050
Photographer: Bill Gresham
Direction of Photograph: Northeast

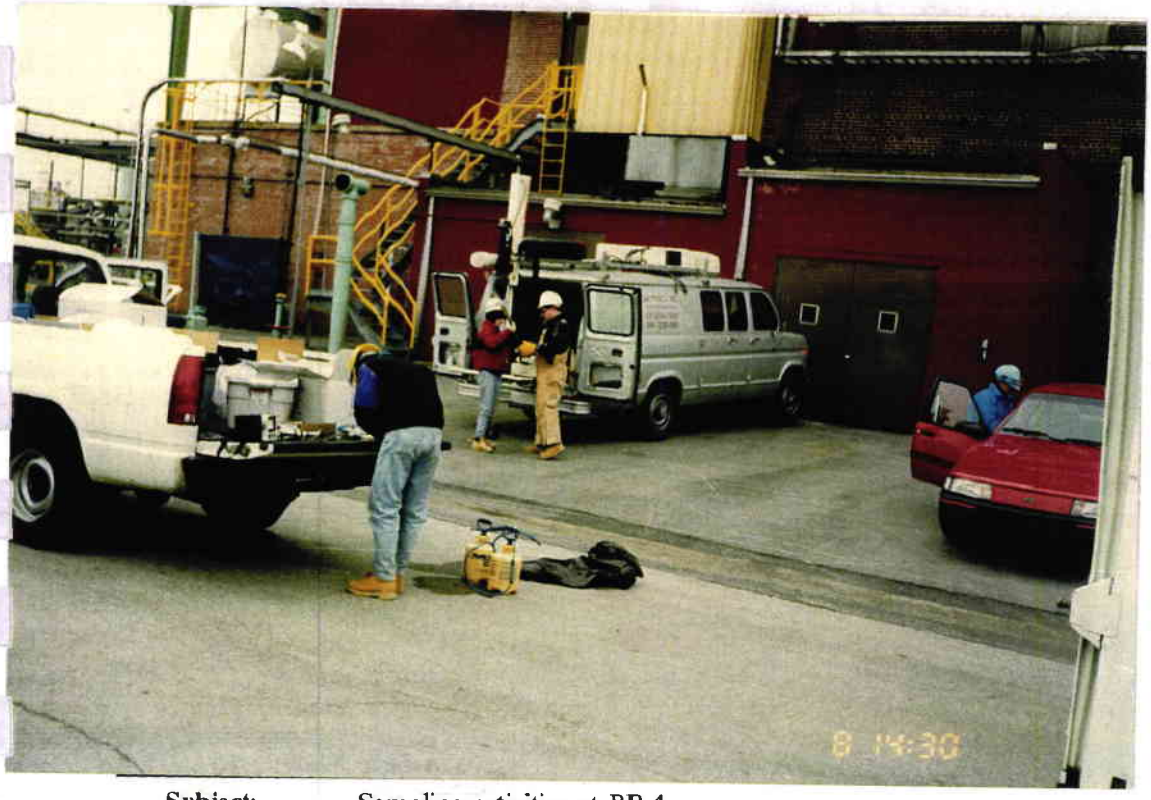
Subject: GTI personnel at VS-11
Location: Former Bulk Chemical Storage Area

SITE NAME: Monsanto

PHOTOGRAPH NO. 7

Date: March 8, 1994
Time: 1130
Photographer: Bill Gresham
Direction of Photograph: North

Subject: Sampling at location VS-12
Location: Former Bulk Chemical Storage Area



PHOTOGRAPH NO. 8

Date: March 8, 1994
Time: 1440
Photographer: Bill Gresham
Direction of Photograph: Southeast

Subject: Sampling activities at BP-4
Location: Boiler Slag Area

SITE NAME: Monsanto

PHOTOGRAPH NO. 9

Date: March 8, 1994
Time: 1645
Photographer: Bill Gresham
Direction of Photograph: North

Subject: Geoprobe work at GP-20-C
Location: Boiler Slag Area

PHOTOGRAPH NO. 10

Date: March 9, 1994
Time: 0830
Photographer: Bill Gresham
Direction of Photograph: South

Subject: Boring/sampling at AC-13
Location: Lasso Area

SITE NAME: Monsanto

PHOTOGRAPH NO. 11

Date: March 9, 1994
Time: 1515
Photographer: Bill Gresham
Direction of Photograph: East

Subject: GTI and G&M setup at AC-1
Location: Lasso Area

ATTACHMENT B

Field Log Notes

TIMES SECTION ① 7 MARCH 1994

The Oversight Manager (OM) Bill Gresham

Weather: Cloudy, sprinkles, (40°F) AM; breezy, cool (45°F) cloudy PM

PERSONNEL ON SITE

Name	Title	Company
Rich Koenig,	Environmental Protection Tech	Monsanto
Jo Hanson,	Project Manager	"
Troy Harlan,	Intern/Co-op	"
Laurie Musiker,	Hydrogeologist	Geraghty & Miller
Jamie Yates,	Geologist	"
John Upcraft,	Vice President	GeoTrace (GTI)
Mike Chenoweth,	Geochemist	"

ACTIVITIES PLANNED

Following mobilization to the site, field personnel will attend a health and safety briefing. Staging activities will be performed, followed by commencement of sampling activities.

SECTION ②

0430 The OM left home to travel to the site.

0930 The OM arrived at the motel.

1000 Following check-in, the OM left the motel and proceeded to the site, immediately proceeding to the safety briefing with Geraghty & Miller and GTI personnel.

William W. Gresham

William W. Crosbie 7 MARCH 1994

1045 The OM met with Monsanto, G&M and GTI personnel to plan work for this afternoon.

1130 The OM left the site with G&M and GTI personnel for lunch.

1200 Returned to site.

1215 Proceeded to the VV Area, where sampling locations were set up.

1245 Geoprobe soil sampling was commenced.

1310 PHOTO 1
Collection of soil sample at VP-4. View Northwest.

1330 Jo and Troy arrived at the site.

1350 PHOTO 2
Mike collecting soil sample at VP-11. View Southwest.

1355 The OM obtained split sample ARD53-028 from location VP-6.

1410 It was decided that, since recovery was relatively low, a stainless steel "macro sampler" would be utilized for sampling at VP-11.

1415 PHOTO 3
Pushing sampler at VP-11. View Southwest.

1435 The OM obtained split samples ARD53-029 and -029D from location VP-11.

William W. Crosbie 7 MARCH 19

1450 After having discovered that their HNu (10.2eV) PID was not working, G&M ordered a new one from Hazco.

NOTE: For today, GTI has 2 geoprobe vans on site with which they are collecting soil sample They are pushing the probe to 3ft. bgs, collecti a soil sample in a sleeve of bis (2-ethylhexyl) phthalate, and moving on. Samples in this area are to be analyzed by Monsanto for PCBs on 24-hour turnaround. EPA samples will also be analyzed for PCBs. Monsanto samples are placed 4oz. wide mouth jars, ~~PCBs~~ EPA samples are placed in 8oz wide mouth jars.

1515 The OM left an update message with EPA WAM Pat Reitz, then spoke with her following communication with several at Jacobs office

1630 PHOTO 4
Sample collection activities. View North.

NOTE: G&M decontaminated equipment using liquinox in ~~tapwater~~ DI wash and a ~~distilled~~ DI water rinse. The Geoprobe soil samplers are 1½-inches in diameter (standard) and 2-inches in diameter (macrosampler), (all dimensions O.D.- I.D's are approx. ⅛-inch smaller).

1730 All sampling completed in VV area for today. All personnel left the site.

STATE #6

CONTINUED

SUMMARY

7 MARCH 1994 TIMES

Activities performed today included mobilization to the site, attendance of a safety briefing, and collection of soil samples at 20 locations at the VV Area (at a depth of 1-3 feet bgs). Split samples were obtained for EPA at VP-6 (ARD53-028) and VP-11 (ARD53-029, and -029D).

William W. Gresham

SECTION ① William W. Gresham 8 MARCH 1994

The Oversight Manager (OM) Bill Gresham

Weather: cloudy, breezy, cold (35°F) AM; becoming ~~partly~~ mostly cloudy, temperature reaching 40°F

PERSONNEL ON SITE

Name	Title	Company
Rich Koenig,	Environmental Protection Tech.	Monsanto
Troy Harlan,	Interry/Co op	"
Laurie Musiker,	Hydrogeologist	G&M
Jamie Yater,	Geologist	"
Mike Chenoweth,	Geochemist	GTI
John Upcraft,	Vice-President	"

~~SECTION ② P6~~

ACTIVITIES PLANNED

Sampling of soil at the Boiler Slag Area will be performed, followed by other sampling.

SECTION ②

0630 The OM arrived at the site. Troy and Mike were already present.

0710 All proceeded to the Former Bulk Chemical Storage Area following preparation and discussion.

0740 Sampling commenced at the Former Bulk Chemic Storage Area.

0800 During sampling at locations VS-7 and VS-8, shallow samples were collected in the 3 feet t

4 feet bgs interval; deeper samples were collected in the 6.5 feet to 7.5 feet bgs interval. Water was encountered at 8 feet bgs.

0815 The GTI vans relocated to VS-7 and VS-8.

0900 Jamie indicated that sampling intervals were ~2.0-2.5 ft bgs for shallow, 3.5-4.0 ft bgs for intermediate and 4.5-5.5 ft bgs for deep samples at locations VS-7 and VS-8.

0945 Sampling commenced at VS-11. Sampling interval 1.5-2.5 ft. bgs. EPA sample no. ARD53-020 and ARD53-020-D. Monsanto sample no ~~ARD53-~~ VS-11-S.

1035 Sampling at VS-11-S complete.

1045 John moved to set up at VS-12.
PHOTO 5
G&M and Monsanto personnel sampling VS-11-~~MI~~. View East.

1050 PHOTO 6
GTI at VS-11. View Northeast.

Note: Purple staining was observed in several samples between

1115 Jamie informed the CM that the intermediate sampling interval at VS-12 would be 2.5 to 4 ft bgs.

1125 Sampling commenced for Monsanto sample no.

~~ARD53-~~ VS-12I (EPA sample no. ARD53-019).

1130 PHOTO 7
Sampling VS-12I. View North.

1135 Sampling for VS-12I complete.

1200 While the other personnel ~~continued~~ completed sampling at the Former Bulk Chemical Storage Area, the CM left the site for lunch/errands.

1230 The CM returned to the site.

1245 Having completed work at the Former Bulk Chem Storage Area, the G&M, Monsanto and GTI person left the site for lunch.

The CM spoke by telephone to EPA WAM Pat Reit and other personnel at the Jacobs office.

1330 All personnel back at site.

1345 Proceeded to the Boiler Slag Area.

1405 The GTI rigs were set in place at BP-1 and BP-4. Monsanto will collect samples for PCBs only. EPA split samples will be obtained for PCB and metals.

1440 PHOTO 8
Sampling activities at BP-4. View Southeast.

The CM obtained sample ARD53-026 (BP-4).

8 MARCH 1994

1520 The CM prepared field blank ARD53-057.

1535 The CM obtained split sample ARD53-027 from Monsanto (no. GP-20A 5). Monsanto submitted for PCBs, cyanide; EPA to be analyzed for PCBs, metals.

1600 The CM prepared water trip blank ARD53-058 (pre-filled at EPA Region VII lab).

1610 The CM labeled soil trip blank ARD53-056 (prepared by EPA Region VII lab).

1645 PHOTO 9
Geoprobe work at GP-20-C View North.

1705 The CM obtained split sample ARD53-044 (Monsanto sample no. GP-20-C S). ~~When GTI~~ Sample interval = 3ft.-4ft. bgs. When GTI went deeper than 4ft, they hit water, so no deeper samples were collected.

1730 Following sample preparation, The CM left the site, preceded by GTI personnel and followed by G&M personnel.

SECTION (3)
SUMMARY

Soil sampling was performed at the Former Bulk Chemical Storage Area, ~~at~~ the Boiler Slag Pad and adjacent to MW-20. EPA split samples were obtained in all 3 areas.

TIMES

SECTION (1)

9 MARCH 1994

The Oversight Manager (OM) Bill Gresham

Weather: Cloudy, breezy, cold (35°F) AM; mostly cloudy, windy, cool (40°F) PM

PERSONNEL ON SITE

Name	Title	Company
Jo Hansen,	Project Manager	Monsanto
Rich Koenig,	Environmental Protection Tech	"
Troy Harlan,	Intern/Co-op	"
Laurie Musiker,	Hydrogeologist	Geraghty & Miller
Jamie Yoter,	Geologist	"
Mike Chenoweth,	Geochemist	GeoTrace (GT
Brian Barrett,	Chemist	"

ACTIVITIES PLANNED

Sampling will proceed at the Quarry and Lasso Areas.

SECTION (2)

0650 The CM arrived at the site. G&M personnel were already present, preparing for sampling.

0705 Proceeded to the Lasso Area and toured it.

0800 Following an attempt to bore through at locati AC-11, GTI relocated to AC-13.

0830 PHOTO 10
Boring/sampling at AC-13. View South.

CONTINUED

William W. Crosher — 9 MARCH 1994

TIMES

0855 The CM obtained split samples ARD53-014 and ARD53-014-D from AC-13-M. The sampling interval is 6ft - 7ft bgs.

0850 Proceeded to location AC-15. Laurie and Brian arrived and cored those holes around the ~~0950~~ Lasso Area ~~throughout~~ which required boring through concrete.

0915 Laurie and Brian proceeded to the area of MW-13

0930 Laurie and Brian proceeded to the Old Quarry Area, to location QP-4

0945 Mike and Jamie proceeded to AC-14.

1020 ~~Laurie and Brian proceeded to the~~ Jamie and Mike proceeded to AC-16

1130 The CM proceeded to the office to use the telephone. EPA WAM Pat Reitz was notified of todays progress.

1200 G&M and GTI personnel left the site for lunch.

1230 The CM left the site for lunch.

1240 The CM returned from lunch.

1300 G&M and GTI returned from lunch.

1330 All proceeded to the Lasso Area. Geoprobe

CONTINUED

William W. Crosher — 9 MARCH 1994

TIMES

sampling continued at AC-11 and AC-12.

1400 Brian and Laurie moved to the Old Quarry Area, location QP-1. (NOTE: At QP-4, bedrock was encountered at 33.2 ft. bgs.) ~~Jamie and Mike moved~~

1510 Jamie and Mike moved to AC-1

1515 ~~FIELD~~ GTI and G&M set up at AC-1 View East.

GTI began advancing the geoprobe at AC-1.

1530 The CM obtained sample no. ARD53-001 (Mons sample no. ~~ARD53-~~ AC-1-S). Both EPA and Monsanto samples will be submitted for VOC and Alachlor analyses. (1ft. - 2ft. bgs)

1535 The CM obtained EPA sample nos. ARD53-01 and ARD53-012-D (Monsanto sample no. AC-1 for VOCs and Alachlor (2ft. - 4ft bgs). Water was encountered at approx. 4.5ft. bgs.

1540 Jamie and Mike relocated to AC-2

Laurie indicated that bedrock was encount at 58.1 ft. bgs

1555 The CM proceeded to QP-2, where samplin was underway.

1[illegible] The CM labeled soil VOA trip blank ARD53

1605 Sampling of GP-2-S (EPA sample no. ARD53-016) complete. Sampled for VOCs, semivolatiles, ~~PCBs~~, Alachlor and Metals. Sampling interval 1ft.-3ft. bgs.

1615 The CM obtained sample no. ARD53-017 (Monsanto sample no. GP-2-I). Sample interval 5ft-7ft bgs.

1620 The CM obtained sample no ARD53-018 (Monsanto sample no. GP-2-D). Sample interval 9ft.-11ft. bgs.

1630 The CM obtained sample no. ARD53-002 (Monsanto sample no. AC-3-S) Sample interval 2ft-4.5ft bgs.

1655 Jamie and Mike relocated to AC-4. Laurie and Brian relocated to GP-3. Laurie indicated that, at GP-2, the Geoprobe had been advanced to 48ft bgs. While apparently in weathered bedrock, GTI decided to pull out due to the feel. After completing the pull-out, it was discovered that 5 rods had been lost.

1720 Jamie and Mike relocated to AC-5, due to obstructions hit at AC-4.

1730 PHOTO 12
Sampling activities at AC-5. View Northwest.

William A. Cowin

1735 The CM obtained sample no. ARD53-003 (Monsanto sample no. AC-5-S) Sample interval 3ft-5ft bgs. Jamie indicated that water and refusal were encountered at 5ft bgs.

1740 Jamie and Mike relocated to AC-7.

1800 Laurie and Brian relocated to AC-6.

1820 Jamie and Mike relocated to AC-8.

1830 PHOTO 13
Sampling activities at AC-8. View Northwest.

1835 The CM obtained sample no. ARD53-004 (Monsanto sample no AC-8-S). Sample interval 1ft-3ft bgs (VOCs, Alachlor)

1840 The CM obtained sample no ARD53-005 (Monsanto sample no AC-8-M) Sample interval 3ft.-5ft. bgs.

1850 The CM obtained sample no. ARD53-006 (Monsanto sample no. AC-8-D) Sample interval 5ft-7ft. bgs. Water was encountered at approx 7.5ft bgs.

1930 Following sample preparation, the CM left the site. GSM personnel were still present.

SECTION (3)
SUMMARY

CONTINUED

9 MARCH 1994

Activities performed today included the completion of sampling at the Lasso Area and sampling at one location adjacent to MW-13 and four of the locations associated with the Old Quarry Area.

William W. Gresham

TIMES

SECTION ① William W. Gresham 10 MARCH 1994

The Oversight Manager (OM) Bill Gresham

Weather: Clear, breezy, cold (35°F) AM; becoming partly cloudy, breezy, warmer (50°F) PM

PERSONNEL ON SITE

Name	Title	Company
Jo Hanson	Project Manager	Monsanto
Rich Koenig	Environmental Protection Tech	"
Troy Harlan	Intern/Co-op	
Laurie Musiker	Hydrogeologist	Geraghty & Miller
Jamie Yater	Geologist	"
Mike Chenoweth	Geochemist	GeoTrace (GTI
Brian Barrett	Chemist	"
John Upcraft	Vice-President	"

ACTIVITIES PLANNED

Sampling will be completed at the Old Quarry Area. The KK Area, the Coal Storage Yard and the background location will be sampled.

SECTION ②

~~SUMO~~

0650 The OM arrived at the site. G&M and Monsanto personnel were already present.

0700 GTI personnel arrived at the site.

0720 While Jamie and Mike proceeded to ~~the~~ do PC sampling at the VV Building and the Boiler Slag Area, Laurie, Brian, Troy and the OM proceeded to the Coal Storage Area.

CONTINUED TIMES

William W. Crosbie 10 MARCH 1994

0800 The CM obtained sample ARD53-046 (Monsanto sample no. HW-2-CP) for VOCs. The sample interval was 14ft-16ft bgs.

0815 Sampling relocated to HB-2.

0835 PHOTO 14
Sampling activities at HB-2. View Northeast.

~~0900~~ 0915 The CM proceeded to the plant to use the telephone.

1000 Following completion of sampling at the Coal Storage Yard, Laurie, Troy and Brian returned to the plant.

1010 All proceeded to the Boiler Slag Area to perform further PCB sampling.

1100 Due to obstructions encountered at approx. 2.5ft bgs, further sampling at the Boiler Slag Area was aborted. All proceeded to the KK Area.

1125 The CM obtained samples ARD53-047 and ARD53-047D (Monsanto sample KP-2-S) for VOCs. Sample interval was 1ft to 3ft bgs.

1145 PHOTO 15
Sampling activities at KP-2. View South.

1155 The CM obtained sample ARD53-049 (Monsanto sample no. KP-2-M). Sample interval 4ft.-6ft. bgs. Water was encountered at 7ft. bgs.

CONTINUED TIMES

William W. Crosbie 10 MARCH 1994

1200 G&M, GTI and Monsanto personnel left the site for lunch. One GTI van was down with mechanical problems. The OM remained at the site to prepare samples for shipment.

1300 G&M, GTI and Monsanto personnel returned to the site.

1330 John Upcraft of GTI arrived to fix the Geoprobe. The OM discussed the PCB sampling with Laurie at the Boiler Slag area. All screening results came back < 25ppm. The highest result was 23.6ppm at location GP-20-B. It was decided that verification samples would be collected at GP-20-B, GP-20-A, BP-3 and BP-4.

1450 PHOTO 16
Sampling at the KK Area. View Northwest.

1510 Jamie indicated that water had been encountered at 7ft. at location KP-4, so we agreed to sampling from 3ft-5ft bgs.

1530 Laurie, Mike, Troy and the CM proceeded to the parking lot to collect background samples.

1540 Sampling at BG-2 commenced.

1555 PHOTO 17
Sampling at BG-2. View South.

1610 PHOTO 18
Compositing soil at BG-2. View South.

TIMES

William A. Crosby 10 MARCH 1994

1615 Sampling at BG-2 complete. The sampling interval was 0ft - 12ft bgs. Sample material ~~1620~~ was composited.

1620 The CM obtained sample ARD53-051 (Monsanto sample no. BG-2) for metals analysis. This is a background sample.

1700 ~~The CM proceeded~~ BG
PHOTO 19
Sampling at BG-1 View North.

1710 The CM proceeded to the Boiler Slag Area. Jamie and Brian were setting up to collect a sample at BP-4.

1745 Sampling complete at BP-4. All proceeded to the Lasso Area, where Jamie and Brian set up to sample at AC-9.

1750 The CM proceeded to BG-3, where sampling was nearly complete. Laurie indicated that the sampling interval stopped at 12ft bgs. at all locations (BG) due to extreme clay stiffness below that depth.

1805 Laurie, Mike, and the CM returned to the plant.

1830 Following sample preparation and documentation the CM left the site. GAM personnel were still present.

SECTION (3)

SUMMARY

Sampling was performed at the Coal Storage Yard (for VOCs), the VV Building - step out sampling (PCBs), the KK Area (VOCs), three background locations (metals) and location AC at the Lasso Area (atrachlor, VOCs). An attempt at step-out sampling at the Boiler Slag Area was aborted when obstructions prevented advancement of the sampler. EPA split samples obtained so far were shipped to the EPA Reg. VII Laboratory.

William A. Crosby

TIMES

SECTION (1) William W. Gresham 11 MARCH 1994

The Oversight Manager (OM) Bill Gresham

Weather: Clear, breezy, cool (40°F AM; warming to 60°F PM

PERSONNEL ON SITE

Name	Title	Company
Jo Hanson,	Project Manager	Monsanto
Rich Koenig,	Environmental Protection Tech	"
Troy Harlan,	Intern/Coop	"
Jamie Yater,	Geologist	Geraghty & Miller (G&M)
John Lyciaft,	Vice President	GeoTrace (GTI)
Mike Chenoweth,	Geochemist	"
Brian Barrett,	Chemist	"
Alan Faust,	Hydrogeologist	Monsanto
Colin Walker		Geoprobe

SECTION (2)

0900 With the van battery dead, The OM called AAA for wrecker service

0920 AAA arrived.

0940 Van started.

0950 The OM arrived at the site. Geoprobe was conducting a demonstration of logging technology.

1030 PHOTO 19
Geoprobe logging demonstration View Southeast

1050 The OM proceeded to the VV Area, where Jamie, Mike and Troy were ready to begin deeper (Phase II) PCB sampling.

CONTINUED
TIMES

11 MARCH 199

1145 PHOTO 20
Geoprobe sampling at VP-30. View Southwest

1150 The OM obtained sample ARD53-031 for PCBs (Monsanto sample VP-30). Sample interval 1ft. - 3ft bgs.

1200 The OM proceeded to the office to use the telephone.

1230 Following communication with EPA WAM Pat Reit and the Jacobs office, and farewells to G&M, Monsanto and GTI personnel, the OM left the site.

SECTION (3)
SUMMARY
Following preparation for travel, parties at the plant attended a demonstration stage by Geoprobe. Deeper sampling at the VV Area (PCBs) was performed. Demobilization from the site and travel occurred.

William W. Gresham

ATTACHMENT C

Chain of Custody/Field Sheets

CHAIN OF CUSTODY RECORD
ENVIRONMENTAL PROTECTION AGENCY REGION VII

ACTIVITY LEADER(Print)	NAME OF SURVEY OR ACTIVITY	DATE OF COLLECTION	SHEET
Pat Reitz	Monsanto - J.F. Queeny	07 (DAY) March (MONTH) 1994 (YEAR)	1 of 1

CONTENTS OF SHIPMENT

SAMPLE NUMBER	1L CUBITAINER	?oz. BOTTLE	?oz. BOTTLE	BOTTLE	VOA SET (2 VIALS EA)	water	soil	sediment	dust	other	RECEIVING LABORATORY REMARKS/OTHER INFORMATION (condition of samples upon receipt, other sample numbers, etc.)
	NUMBERS OF CONTAINERS PER SAMPLE NUMBER										
ARD53-028		1					X				
ARD53-029		1					X				
ARD53-029-D		1					X				
ARD53-019		3			1		X				
ARD53-020		3			1		X				
ARD53-020-D		3			1		X				
ARD53-026		2					X				
ARD53-027		2					X				
ARD53-044		1					X				
~~ARD53-045~~		~~1~~					~~X~~				
ARD53-056-F					1		X				
ARD53-057	2		3		1	X					
ARD53-058-F					1	X					

NONE FOLLOWS

DESCRIPTION OF SHIPMENT	MODE OF SHIPMENT
28 PIECE(S) CONSISTING OF ____ BOX(ES)	X COMMERCIAL CARRIER: Federal Express
1 ICE CHEST(S); OTHER ____	___ COURIER
	___ SAMPLER CONVEYED 1758779724 (SHIPPING DOCUMENT NUMBER)

PERSONNEL CUSTODY RECORD

RELINQUISHED BY (SAMPLER)	DATE	TIME	RECEIVED BY	REASON FOR CHANGE OF CUSTODY
William J. Greshan — SEALED ☐ UNSEALED ☐	3/7/94	1800	SEALED ☐ UNSEALED ☐	
RELINQUISHED BY — SEALED ☐ UNSEALED ☐	DATE	TIME	RECEIVED BY — SEALED ☐ UNSEALED ☐	REASON FOR CHANGE OF CUSTODY
RELINQUISHED BY — SEALED ☐ UNSEALED ☐	DATE	TIME	RECEIVED BY — SEALED ☐ UNSEALED ☐	REASON FOR CHANGE OF CUSTODY

CHAIN OF CUSTODY RECORD
ENVIRONMENTAL PROTECTION AGENCY REGION VII

ACTIVITY LEADER(Print)	NAME OF SURVEY OR ACTIVITY	DATE OF COLLECTION (DAY / MONTH / YEAR)	SHEET
Pat Reitz	Monsanto - J.F. Queeny	09 / March / 1994	1 of 1

CONTENTS OF SHIPMENT

SAMPLE NUMBER	TYPE OF CONTAINERS: CUBITAINER	8oz BOTTLE	BOTTLE	BOTTLE	VOA SET (2 VIALS EA)	SAMPLED MEDIA: water	soil	sediment	dust	other	RECEIVING LABORATORY REMARKS/OTHER INFORMATION (condition of samples upon receipt, other sample numbers, etc.)
	NUMBERS OF CONTAINERS PER SAMPLE NUMBER										
ARD53-C01		1			1		X				
ARD53-C02		1			1		X				
ARD53-C03		1			1		X				
ARD53-C04		1			1		X				
ARD53-C05		1			1		X				
ARD53-C06		1			1		X				
ARD53-C12		1			1		X				
ARD53-C12-D		1			1		X				
ARD53-C14		1					X				
ARD53-C14-D		1					X				
ARD53-C16		3			1		X				
ARD53-C17		3			1		X				
ARD53-C18		3			1		X				
ARD53-C46					1		X				
ARD53-C47					1		X				
ARD53-C47-D					1		X				
ARD53-C49					1		X				
ARD53-C53-F					1		X				

DESCRIPTION OF SHIPMENT

35 PIECE(S) CONSISTING OF _____ BOX(ES)

1 ICE CHEST(S); OTHER _____

MODE OF SHIPMENT

X COMMERCIAL CARRIER: Federal Express

_____ COURIER

_____ SAMPLER CONVEYED

175877973506 (SHIPPING DOCUMENT NUMBER)

PERSONNEL CUSTODY RECORD

RELINQUISHED BY (SAMPLER)	DATE	TIME	RECEIVED BY	REASON FOR CHANGE OF CUSTODY
William J. Graham	3/10/94	1230	SEALED / UNSEALED	
RELINQUISHED BY	DATE	TIME	RECEIVED BY	REASON FOR CHANGE OF CUSTODY
SEALED / UNSEALED			SEALED / UNSEALED	
RELINQUISHED BY	DATE	TIME	RECEIVED BY	REASON FOR CHANGE OF CUSTODY
SEALED / UNSEALED			SEALED / UNSEALED	

CHAIN OF CUSTODY RECORD
ENVIRONMENTAL PROTECTION AGENCY REGION VII

ACTIVITY LEADER(Print)	NAME OF SURVEY OR ACTIVITY	DATE OF COLLECTION (DAY / MONTH / YEAR)	SHEET
Pat Reitz	Monsanto - Queeny	10 / March / 1994	1 of 1

CONTENTS OF SHIPMENT

SAMPLE NUMBER	TYPE OF CONTAINERS: CUBITAINER	8oz BOTTLE	BOTTLE	BOTTLE	VOA SET (2 VIALS EA)	SAMPLED MEDIA: water	soil	sediment	dust	other	RECEIVING LABORATORY REMARKS/OTHER INFORMATION (condition of samples upon receipt, other sample numbers, etc.)
	NUMBERS OF CONTAINERS PER SAMPLE NUMBER										
ARD53-031		1					X				
ARD53-051		1					X				

NOTHING FOLLOWS

DESCRIPTION OF SHIPMENT

2 PIECE(S) CONSISTING OF _____ BOX(ES)

1 ICE CHEST(S); OTHER _____

MODE OF SHIPMENT

_____ COMMERCIAL CARRIER: _____

_____ COURIER

X SAMPLER CONVEYED

_____ (SHIPPING DOCUMENT NUMBER)

PERSONNEL CUSTODY RECORD

RELINQUISHED BY (SAMPLER)	DATE	TIME	RECEIVED BY	REASON FOR CHANGE OF CUSTODY
William W. Reitz ☐ SEALED ☐ UNSEALED	3/10/94	11:10	☐ SEALED ☐ UNSEALED	
RELINQUISHED BY ☐ SEALED ☐ UNSEALED	DATE	TIME	RECEIVED BY ☐ SEALED ☐ UNSEALED	REASON FOR CHANGE OF CUSTODY
RELINQUISHED BY ☐ SEALED ☐ UNSEALED	DATE	TIME	RECEIVED BY ☐ SEALED ☐ UNSEALED	REASON FOR CHANGE OF CUSTODY

7-EPA-9262(Revised 5/85)

RAFT

FIELD SHEET
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

Y: 94 ACTNO: ARD53 SAMNO: 001 QCC: _ MEDIA: SOIL PL: DONA, BOB

CTIVITY DES: MONSANTO, QUEENY PLANT REF LATITUDE: __ __ __
OCATION: ST. LOUIS MO PROJECT NUM: A60 PT: LONGITUDE: ___ __ __

AMPLE DES: AC-1-S
OCATION: _____ MO
ASE/BATCH/SMO: ____/__/____ LAB: ___
TORET/AIRS NO: _____

	DATE	TIME	FROM REF PT
BEG:	3/9/94	15:30	EAST: ____
END:	__/__/__	__:__	NORTH: ____
			DOWN: ____

NALYSIS REQUESTED:

ONTAINER	PRESERVATIVE	MGP	NAME
-40 ML VIALS	COOL (4 C)	SV	SOIL VOLATILES
OZ GLASS	COOL (4 C)	SP68	ALACHLOR

OMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

1ft. - 2ft. bgs

MPLE COLLECTED BY : Bill Parker

RAFT

FIELD SHEET
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

Y: 94 ACTNO: ARD53 SAMNO: 002 QCC: _ MEDIA: SOIL PL: DONA, BOB

CTIVITY DES: MONSANTO, QUEENY PLANT REF LATITUDE: __ __ __
OCATION: ST. LOUIS MO PROJECT NUM: A60 PT: LONGITUDE: __ __ __

MPLE DES: AC AC-3-S
OCATION: _____ MO
ASE/BATCH/SMO: ____/__/____ LAB: ___
ORET/AIRS NO: _____

	DATE	TIME	FROM REF PT
BEG:	3/9/94	16:30	EAST: ____
END:	__/__/__	__:__	NORTH: ____
			DOWN: ____

ALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
40 ML VIALS	COOL (4 C)	SV	SOIL VOLATILES
OZ GLASS	COOL (4 C)	SP68	ALACHLOR

MMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

2ft - 4.5 ft. bgs.

IPLE COLLECTED BY : Bill Christman

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 94 ACTNO: ARD53 SAMNO: 003 QCC: _ MEDIA: SOIL PL: DONA, BOB

ACTIVITY DES: MONSANTO, QUEENY PLANT
LOCATION: ST. LOUIS MO PROJECT NUM: A60 REF LATITUDE: PT: LONGITUDE: — — — — — —

SAMPLE DES: AC-5-S
LOCATION: MO
CASE/BATCH/SMO: ____/__/____ LAB: ___
STORET/AIRS NO: _____

	DATE	TIME	FROM REF PT
BEG:	3/9/94	17:35	EAST: ____
END:	__/__/__	__:__	NORTH: ____
			DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
2-40 ML VIALS	COOL (4 C)	SV	SOIL VOLATILES
8 OZ GLASS	COOL (4 C)	SP68	ALACHLOR

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

3 ft - 5 ft bgs.

AMPLE COLLECTED BY : Bill Cuba

DRAFT

FIELD SHEET
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 94 ACTNO: ARD53 SAMNO: 004 QCC: _ MEDIA: SOIL PL: DONA, BOB

ACTIVITY DES: MONSANTO, QUEENY PLANT REF LATITUDE: — — —
LOCATION: ST. LOUIS MO PROJECT NUM: A60 PT: LONGITUDE: — — —

SAMPLE DES: AC-E-S
LOCATION: _____ MO
CASE/BATCH/SMO: ____/__/____ LAB: ___
STORET/AIRS NO: _____

	DATE	TIME	FROM REF PT
BEG:	3/9/94	16:35	EAST: ____
END:	__/__/__	__:__	NORTH: ____
			DOWN: ____

NALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
-40 ML VIALS	COOL (4 C)	SV	SOIL VOLATILES
OZ GLASS	COOL (4 C)	SP68	ALACHLOR

OMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

1ft.-3ft. bgs

MPLE COLLECTED BY : Bill Cirtha

RAFT

FIELD SHEET
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

:Y: 94 ACTNO: ARD53 SAMNO: 005 QCC: _ MEDIA: SOIL PL: DONA, BOB

CTIVITY DES: MONSANTO, QUEENY PLANT REF LATITUDE: __ __ __
OCATION: ST. LOUIS MO PROJECT NUM: A60 PT: LONGITUDE: __ __ __

AMPLE DES: AC-E-M
OCATION: MO
:ASE/BATCH/SMO: __/__/__ LAB: ___
'TORET/AIRS NO: ____

	DATE	TIME	FROM REF PT
BEG:	3/9/94	16:45	EAST: ____
END:	__/__/__	__:__	NORTH: ____
			DOWN: ____

NALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
-40 ML VIALS	COCL (4 C)	SV	SOIL VOLATILES
OZ GLASS	COOL (4 C)	SP68	ALACHLOR

OMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

3ft-5ft bgs

MPLE COLLECTED BY : Bill Cinelli

.RAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

'Y: 94 ACTNO: ARD53 SAMNO: 006 QCC: _ MEDIA: SOIL PL: DONA, BOB

:TIVITY DES: MONSANTO, QUEENY PLANT REF LATITUDE: __ __ __
.OCATION: ST. LOUIS MO PROJECT NUM: A60 PT: LONGITUDE: __ __ __

AMPLE DES: AC-E-1
)CATION: _____ MO
:ASE/BATCH/SMO: ____/__/____ LAB: ___
'ORET/AIRS NO: _____

DATE TIME FROM REF PT
BEG: 3/9/94 12:50 EAST: ____
END: __/__/__ __:__ NORTH: ____
DOWN: ____

.NALYSIS REQUESTED:

:ONTAINER	PRESERVATIVE	MGP	NAME
-40 ML VIALS	COOL (4 C)	SV	SOIL VOLATILES
OZ GLASS	COOL (4 C)	SP68	ALACHLOR

)MMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER: ___ OPERABLE UNIT: ___

5ft. - 7ft. bgs.

MPLE COLLECTED BY : Bill Rush

RAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII

ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

Y: 94 ACTNO: ARD53 SAMNO: 012 QCC: _ MEDIA: SOIL PL: DONA, BOB

CTIVITY DES: MONSANTO, QUEENY PLANT
OCATION: ST. LOUIS MO PROJECT NUM: A60 REF PT: LATITUDE: __ __ __ LONGITUDE: __ __ __

AMPLE DES: AC-1-D
OCATION: ______ MO
ASE/BATCH/SMO: ____/_/____ LAB: ___
STORET/AIRS NO: ____

	DATE	TIME
BEG:	3/9/94	15:35
END:	__/__/__	__:__

FROM REF PT
EAST: ____
NORTH: ____
DOWN: ____

NALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
-40 ML VIALS	COOL (4 C)	SV	SOIL VOLATILES
OZ GLASS	COOL (4 C)	SP68	ALACHLOR

OMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

2ft-4ft. bgs.

IPLE COLLECTED BY : Bill Cristin

DRAFT

FIELD SHEET
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 94 ACTNO: ARD53 SAMNO: 012[65] QCC: D MEDIA: SOIL PL: DONA, BOB

ACTIVITY DES: MONSANTO, QUEENY PLANT REF LATITUDE: __ __ __
LOCATION: ST. LOUIS MO PROJECT NUM: A60 PT: LONGITUDE: __ __ __

SAMPLE DES: AC-1-D
LOCATION: _____ MO
CASE/BATCH/SMO: __/__/__ LAB: ___
STORET/AIRS NO: _____

	DATE	TIME	FROM REF PT
BEG:	3/9/94	15:35	EAST: ____
END:	__/__/__	__:__	NORTH: ____
			DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
2-40 ML VIALS	COOL (4 C)	SV	SOIL VOLATILES
8 OZ GLASS	COOL (4 C)	SP68	ALACHLOR

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

2 ft. - 4 ft. bgs

SAMPLE COLLECTED BY : Bill Cinton

RAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

Y: 94 ACTNO: ARD53 SAMNO: 014 QCC: _ MEDIA: SOIL PL: DONA, BOB

CTIVITY DES: MONSANTO, QUEENY PLANT REF LATITUDE: __ __ __
OCATION: ST. LOUIS MO PROJECT NUM: A60 PT: LONGITUDE: ___ __ __

AMPLE DES: AC-13-M
OCATION: _____ MO
ASE/BATCH/SMO: ____/__/____ LAB: ___
CORET/AIRS NO: _____

	DATE	TIME	FROM REF PT
BEG:	3/9/94	08:35	EAST: ____
END:	__/__/__	__:__	NORTH: ____
			DOWN: ____

NALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
OZ GLASS	COOL (4 C)	SP68	ALACHLOR

OMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

6-7 ft bgs

MPLE COLLECTED BY : Bill Burton

DRAFT

FIELD SHEET
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 94 ACTNO: ARD53 SAMNO: 015 QCC: D MEDIA: SOIL PL: DONA, BOB

ACTIVITY DES: MONSANTO, QUEENY PLANT REF LATITUDE: __ __ __
LOCATION: ST. LOUIS MO PROJECT NUM: A60 PT: LONGITUDE: __ __ __

SAMPLE DES: AC-13-M
LOCATION: __________ MO

	DATE	TIME	FROM REF PT
BEG:	3/9/94	08:35	EAST: ____
END:	__/__/__	__:__	NORTH: ____
			DOWN: ____

CASE/BATCH/SMO: ____/_/____ LAB: ___
STORET/AIRS NO: ______

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
OZ GLASS	COOL (4 C)	SP68	ALACHLOR

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

6-7 ft bgs

SAMPLE COLLECTED BY : Bill Gleason

)RAFT

FIELD SHEET
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 94 ACTNO: ARD53 SAMNO: 016 QCC: _ MEDIA: SOIL PL: DONA, BOB

CTIVITY DES: MONSANTO, QUEENY PLANT REF LATITUDE: __ __ __
OCATION: ST. LOUIS MO PROJECT NUM: A60 PT: LONGITUDE: __ __ __

AMPLE DES: GP-1-B[illegible]
OCATION: _____ MO
CASE/BATCH/SMO: ____/__/____ LAB: ___
CTORET/AIRS NO: _____

	DATE	TIME	FROM REF PT
BEG:	3/9/94	15:55	EAST: ____
END:	__/__/__	16:05	NORTH: ____
			DOWN: ____

NALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
LASS	ICED	SS	SEMIVOLATILES
LASS	ICED	SM	METALS
2-40 ML VIALS	COOL (4 C)	SV	SOIL VOLATILES
OZ GLASS	COOL (4 C)	SP68	ALACHLOR

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

1ft.-3ft. bgs

MPLE COLLECTED BY : Bill Clarke

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 94 ACTNO: ARD53 SAMNO: 017 QCC: _ MEDIA: SOIL PL: DONA, BOB

ACTIVITY DES: MONSANTO, QUEENY PLANT
LOCATION: ST. LOUIS MO PROJECT NUM: A60 REF LATITUDE: __ __ __
PT: LONGITUDE: __ __ __

SAMPLE DES: GP-2-I
LOCATION: MO
CASE/BATCH/SMO: __/__/__ LAB: __
STORET/AIRS NO: __

	DATE	TIME	FROM REF PT
BEG:	3/9/94	16:15	EAST:
END:	__/__/__	__:__	NORTH:
			DOWN:

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
GLASS	ICED	SS	SEMIVOLATILES
GLASS	ICED	SM	METALS
2-40 ML VIALS	COOL (4 C)	SV	SOIL VOLATILES
8 OZ GLASS	COOL (4 C)	SP68	ALACHLOR

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

5ft. - 7ft. bgs

SAMPLE COLLECTED BY : Bill Cirsten

RAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 94 ACTNO: ARD53 SAMNO: 018 QCC: _ MEDIA: SOIL PL: DONA, BOB

CTIVITY DES: MONSANTO, QUEENY PLANT REF LATITUDE: __ __ __
OCATION: ST. LOUIS MO PROJECT NUM: A60 PT: LONGITUDE: ___ __ __

AMPLE DES: GP-2-D
OCATION: _____ MO
ASE/BATCH/SMO: ____/_/____ LAB: ___
TORET/AIRS NO: _____

	DATE	TIME	FROM REF PT
BEG:	3/9/94	16:20	EAST: ____
END:	__/__/__	__:__	NORTH: ____
			DOWN: ____

NALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
LASS	ICED	SS	SEMIVOLATILES
LASS	ICED	SM	METALS
-40 ML VIALS	COOL (4 C)	SV	SOIL VOLATILES
OZ GLASS	COOL (4 C)	SP68	ALACHLOR

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

9ft. - 11ft. bgs.

MPLE COLLECTED BY : Bill Cushon

-RAFT

FIELD SHEET
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 94 ACTNO: ARD53 SAMNO: 019 QCC: _ MEDIA: SOIL PL: DONA, BOB

CTIVITY DES: MONSANTO, QUEENY PLANT REF LATITUDE: __ __ __
-OCATION: ST. LOUIS MO PROJECT NUM: A60 PT: LONGITUDE: __ __ __

AMPLE DES: VS-12I
OCATION: ______ MO
CASE/BATCH/SMO: ___/_/___ LAB: ___
TORET/AIRS NO: ___

	DATE	TIME	FROM REF PT	
BEG:	3/8/94	11:25	EAST:	___
END:	__/__/__	11:35	NORTH:	___
			DOWN:	___

-NALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
-LASS	ICED	SS	SEMIVOLATILES
-LASS	ICED	~~SM~~ SPEB	~~METALS~~ ALACHLOR
2-40 ML VIALS	COOL (4 C)	SV	SOIL VOLATILES
-LASS	NONE	ST13	SULFIDE 5 ml Zinc Acetate as preservative

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

2.5 ft - 4.0 ft bgs

MPLE COLLECTED BY : Bill Graham

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 94 ACTNO: ARD53 SAMNO: 020 QCC: _ MEDIA: SOIL PL: DONA, BOB

CTIVITY DES: MONSANTO, QUEENY PLANT REF LATITUDE: __ __ __
OCATION: ST. LOUIS MO PROJECT NUM: A60 PT: LONGITUDE: __ __ __

MPLE DES: VS-11-S
OCATION: _____ MO
CASE/BATCH/SMO: __/__/__ LAB: ___
TORET/AIRS NO: _____

	DATE	TIME	FROM REF PT
BEG:	3/8/94	09:45	EAST: ____
END:	__/__/__	10:25	NORTH: ____
			DOWN: ____

ALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
ASS	ICED	SS	SEMIVOLATILES
ASS	ICED	~~SM~~ SPL8	~~METALS~~ ALACHLOR
-40 ML VIALS	COOL (4 C)	SV	SOIL VOLATILES
ASS	NONE	ST13	SULFIDE 5ml Zinc Acetate as preservative

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

1.5 ft - 2.5ft bgs

PLE COLLECTED BY : Bill Cullen

RAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

Y: 94 ACTNO: ARD53 SAMNO: 021 QCC: D MEDIA: SOIL PL: DONA, BOB

CTIVITY DES: MONSANTO, QUEENY PLANT REF LATITUDE: __ __ __
OCATION: ST. LOUIS MO PROJECT NUM: A60 PT: LONGITUDE: __ __ __

AMPLE DES: VS-11-S
OCATION: _____ MO
ASE/BATCH/SMO: __/__/__ LAB: ___
TORET/AIRS NO: _____

	DATE	TIME	FROM REF PT
BEG:	3/8/94	09:45	EAST: ____
END:	__/__/__	10:25	NORTH: ____
			DOWN: ____

NALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
LASS	ICED	SS	SEMIVOLATILES
LASS	ICED	~~SM~~ SMSPLE	~~METALS~~ ALACHLOR
-40 ML VIALS	COOL (4 C)	SV	SOIL VOLATILES
LASS	NONE	ST13	SULFIDE 5ml 2inc Acetate as preservative

OMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

1.5ft. - 2.5ft. bgs

MPLE COLLECTED BY : Bill Cureton

RAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

Y: 94 ACTNO: ARD53 SAMNO: 026 QCC: _ MEDIA: SOIL PL: DONA, BOB

CTIVITY DES: MONSANTO, QUEENY PLANT REF LATITUDE: __ __ __
OCATION: ST. LOUIS MO PROJECT NUM: A60 PT: LONGITUDE: __ __ __

AMPLE DES: BP-4 DATE TIME FROM REF PT
OCATION: _____ MO BEG: 3/8/94 14:40 EAST: ____
ASE/BATCH/SMO: ____/__/____ LAB: ___ END: __/__/__ __:__ NORTH: ____
ORET/AIRS NO: _____ DOWN: ____

NALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
CLASS	ICED	SM	METALS
CLASS	ICED	S16	PCB'S - G. BEEMONT

OMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

1ft. - 3ft. bgs.

AMPLE COLLECTED BY : Bill Cosha

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 94 ACTNO: ARD53 SAMNO: 027 QCC: _ MEDIA: SOIL PL: DONA, BOB

ACTIVITY DES: MONSANTO, QUEENY PLANT REF LATITUDE: __ __ __
LOCATION: ST. LOUIS MO PROJECT NUM: A60 PT: LONGITUDE: __ __ __

SAMPLE DES: GP-20AS
LOCATION: _____ MO
CASE/BATCH/SMO: __/__/__ LAB: ___
STORET/AIRS NO: _____

	DATE	TIME	FROM REF PT
BEG:	3/8/94	15:35	EAST: ____
END:	__/__/__	__:__	NORTH: ____
			DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
GLASS	ICED	SM	METALS
GLASS	ICED	S16	PCB'S - G. BEEMONT

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

1 ft. - 3 ft. BGS

AMPLE COLLECTED BY : Bill Crosby

RAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

Y: 94 ACTNO: ARD53 SAMNO: 028 QCC: _ MEDIA: SOIL PL: DONA, BOB

TIVITY DES: MONSANTO, QUEENY PLANT REF LATITUDE: __ __ __
OCATION: ST. LOUIS MO PROJECT NUM: A60 PT: LONGITUDE: ___ __ __

MPLE DES: VP-6 DATE TIME FROM REF PT
CATION: _____ MO BEG: 3/7/94 13:55 EAST: ____
ASE/BATCH/SMO: ____/__/____ LAB: ___ END: __/__/__ __:__ NORTH: ____
ORET/AIRS NO: _____ DOWN: ____

NALYSIS REQUESTED:

NTAINER	PRESERVATIVE	MGP	NAME
ASS	ICED	S16	PCB'S - G. BEEMONT

MMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

VP-6

MPLE COLLECTED BY : Bill Cranham

RAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

Y: 94 ACTNO: ARD53 SAMNO: 029 QCC: _ MEDIA: SOIL PL: DONA, BOB

TIVITY DES: MONSANTO, QUEENY PLANT REF LATITUDE: __ __ __
OCATION: ST. LOUIS MO PROJECT NUM: A60 PT: LONGITUDE: __ __ __

MPLE DES: VP-11
OCATION: _____ MO
ASE/BATCH/SMO: __/__/__ LAB: ___
ORET/AIRS NO: _____

	DATE	TIME	FROM REF PT
BEG:	3/7/94	13:50	EAST: ____
END:	__/__/__	14:35	NORTH: ____
			DOWN: ____

NALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
GLASS	ICED	S16	PCB'S - G. BEEMONT

OMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

VP-11

MPLE COLLECTED BY : Bill Graham

DRAFT

FIELD SHEET
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 94 ACTNO: ARD53 SAMNO: 031 QCC: D MEDIA: SOIL PL: DONA, BOB

ACTIVITY DES: MONSANTO, QUEENY PLANT REF LATITUDE: __ __ __
LOCATION: ST. LOUIS MO PROJECT NUM: A60 PT: LONGITUDE: ___ __ __

SAMPLE DES: VP-11
LOCATION: _____ MO
CASE/BATCH/SMO: ____/__/____ LAB: ___
STORET/AIRS NO: _____

	DATE	TIME	FROM REF PT
BEG:	3/7/94	13:30	EAST: ____
END:	__/__/__	14:35	NORTH: ____
			DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
GLASS	ICED	S16	PCB'S - G. BEEMONT

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

VP-11

SAMPLE COLLECTED BY : Bill Gresham

RAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 94 ACTNO: ARD53 SAMNO: 031 QCC: _ MEDIA: SOIL PL: DONA, BOB

CTIVITY DES: MONSANTO, QUEENY PLANT REF LATITUDE: __ __ __
OCATION: ST. LOUIS MO PROJECT NUM: A60 PT: LONGITUDE: ___ __ __

AMPLE DES: VP-3C
OCATION: _____ MO
CASE/BATCH/SMO: ____/_/____ LAB: ___
TORET/AIRS NO: _____

	DATE	TIME	FROM REF PT
BEG:	3/11/94	11:50	EAST: ____
END:	__/__/__	__:__	NORTH: ____
			DOWN: ____

NALYSIS REQUESTED:

CONTAINER CLASS	PRESERVATIVE	MGP	NAME
	ICED	S16	PCB'S - G. BEEMONT

OMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

1ft - 3ft bgs

MPLE COLLECTED BY : Bill Cleek

RAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 94 ACTNO: ARD53 SAMNO: 044 QCC: _ MEDIA: SOIL PL: DONA, BOB

CTIVITY DES: MONSANTO, QUEENY PLANT REF LATITUDE: __ __ __
OCATION: ST. LOUIS MO PROJECT NUM: A60 PT: LONGITUDE: __ __ __

MPLE DES: MW-20 GP-20-CS
OCATION: MW-20 MO
ASE/BATCH/SMO: __/__/__ LAB: __
ORET/AIRS NO: _____

	DATE	TIME	FROM REF PT
BEG:	3/8/94	17:05	EAST:
END:	__/__/__	__:__	NORTH:
			DOWN:

NALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
LASS	NONE	ST09	CYANIDE, TOTAL

OMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER: ___ OPERABLE UNIT: ___

MPLE COLLECTED BY : Bill Cline

RAFT

FIELD SHEET
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 94 ACTNO: ARD53 SAMNO: 046 QCC: _ MEDIA: SOIL PL: DONA, BOB

CTIVITY DES: MONSANTO, QUEENY PLANT REF LATITUDE: __ __ __
LOCATION: ST. LOUIS MO PROJECT NUM: A60 PT: LONGITUDE: __ __ __

AMPLE DES: HW-2-GP
OCATION: _____ MO
CASE/BATCH/SMO: ____/_/____ LAB: ___
TORET/AIRS NO: _____

	DATE	TIME	FROM REF PT
BEG:	3/10/94	08:00	EAST: ____
END:	__/__/__	__:__	NORTH: ____
			DOWN: ____

NALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
-40 ML VIALS	COOL (4 C)	SV	SOIL VOLATILES

OMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

14ft - 16ft bgs

MPLE COLLECTED BY : Bill Coulter

DRAFT

FIELD SHEET
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 94 ACTNO: ARD53 SAMNO: 047 QCC: _ MEDIA: SOIL PL: DONA, BOB

CTIVITY DES: MONSANTO, QUEENY PLANT REF LATITUDE: __ __ __
LOCATION: ST. LOUIS MO PROJECT NUM: A60 PT: LONGITUDE: __ __ __

AMPLE DES: KP-2-S
OCATION: _____ MO
CASE/BATCH/SMO: ____/__/____ LAB: ___
TORET/AIRS NO: _____

	DATE	TIME	FROM REF PT
BEG:	3/10/94	11:25	EAST: ____
END:	__/__/__	__:__	NORTH: ____
			DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
-40 ML VIALS	COOL (4 C)	SV	SOIL VOLATILES

OMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

1ft-3ft. bgs

AMPLE COLLECTED BY : Bill Cuska

DRAFT

FIELD SHEET
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 94 ACTNO: ARD53 SAMNO: 048 QCC: D MEDIA: SOIL PL: DONA, BOB

ACTIVITY DES: MONSANTO, QUEENY PLANT REF LATITUDE: __ __ __
LOCATION: ST. LOUIS MO PROJECT NUM: A60 PT: LONGITUDE: __ __ __

SAMPLE DES: KP-2-S
LOCATION: _____ MO
CASE/BATCH/SMO: ____/__/____ LAB: ___
STORET/AIRS NO: _____

	DATE	TIME	FROM REF PT
BEG:	3/10/94	11:25	EAST: ____
END:	__/__/__	__:__	NORTH: ____
			DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
2-40 ML VIALS	COOL (4 C)	SV	SOIL VOLATILES

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

1ft-3ft. bgs

SAMPLE COLLECTED BY : Bill Cruch

RAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

Y: 94 ACTNO: ARD53 SAMNO: 049 QCC: _ MEDIA: SOIL PL: DONA, BOB

TIVITY DES: MONSANTO, QUEENY PLANT REF LATITUDE: __ __ __
OCATION: ST. LOUIS MO PROJECT NUM: A60 PT: LONGITUDE: __ __ __

MPLE DES: KP-2-M
CATION: _____ MO
ASE/BATCH/SMO: __/__/__ LAB: ___
ORET/AIRS NO: _____

	DATE	TIME	FROM REF PT
BEG:	3/10/94	11:55	EAST: ____
END:	__/__/__	__:__	NORTH: ____
			DOWN: ____

NALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
40 ML VIALS	COOL (4 C)	SV	SOIL VOLATILES

MMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

MPLE COLLECTED BY : _____

..AFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

:Y: 94 ACTNO: ARD53 SAMNO: 051 QCC: _ MEDIA: SOIL PL: DONA, BOB

:TIVITY DES: MONSANTO, QUEENY PLANT REF LATITUDE: __ __ __
..OCATION: ST. LOUIS MO PROJECT NUM: A60 PT: LONGITUDE: __ __ __

MPLE DES: B6-2 DATE TIME FROM REF PT
:CATION: _____ MO BEG: 3/10/94 15:40 EAST: ____
:ASE/BATCH/SMO: ____/__/____ LAB: ___ END: __/__/__ 16:15 NORTH: ____
:ORET/AIRS NO: _____ DOWN: ____

..ALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
.ASS	ICED	SM	METALS

)MMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

0ft - 12ft bgs

MPLE COLLECTED BY : Bill Clark

DRAFT

FIELD SHEET
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 94 ACTNO: ARD53 SAMNO: 055 QCC: F MEDIA: SOIL PL: DONA, BOB

ACTIVITY DES: MONSANTO, QUEENY PLANT REF LATITUDE: __ __ __
LOCATION: ST. LOUIS MO PROJECT NUM: A60 PT: LONGITUDE: __ __ __

SAMPLE DES: TRIP BLANK
LOCATION: _____ MO
CASE/BATCH/SMO: ____/__/____ LAB: ___
STORET/AIRS NO: _____

	DATE	TIME	FROM REF PT
BEG:	3/9/94	16:00	EAST: ____
END:	__/__/__	__:__	NORTH: ____
			DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
2-40 ML VIALS	COOL (4 C)	SV	SOIL VOLATILES

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

SAMPLE COLLECTED BY : Bill Weston

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 94 ACTNO: ARD53 SAMNO: 056 QCC: F MEDIA: SOIL PL: DONA, BOB

ACTIVITY DES: MONSANTO, QUEENY PLANT
LOCATION: ST. LOUIS MO PROJECT NUM: A60 PT:

REF LATITUDE: __ __ __
LONGITUDE: ___ __ __

SAMPLE DES: TRIP BLANK
LOCATION: _____ MO
CASE/BATCH/SMO: ____/__/____ LAB: ___
STORET/AIRS NO: _____

DATE TIME FROM REF PT
BEG: 3/8/94 16:10 EAST: ____
END: __/__/__ __:__ NORTH: ____
DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
3-40 ML VIALS	COOL (4 C)	SV	SOIL VOLATILES

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

SAMPLE COLLECTED BY : Bill Gaston

RAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

RY: 94 ACTNO: ARD53 SAMNO: 057 QCC: _ MEDIA: WATER PL: DONA, BOB

CTIVITY DES: MONSANTO, QUEENY PLANT REF LATITUDE: __ __ __
OCATION: ST. LOUIS MO PROJECT NUM: A60 PT: LONGITUDE: ___ __ __

AMPLE DES: field blank
OCATION: _____ MO
CASE/BATCH/SMO: ____/__/____ LAB: ___
TORET/AIRS NO: _____

	DATE	TIME	FROM REF PT
BEG:	3/8/94	15:20	EAST: ____
END:	__/__/__	__:__	NORTH: ____
			DOWN: ____

ALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
40 ML VIALS	HCL +COOL (4 C)	WV	WATER VOLATILES
ASS	ICED	WS	SEMIVOLATILES
UBI	5 ML HNO3	WM	METALS
ASS	ICED	W24	PCB - G. BEEMONT
BI	NAOH	WT09	CYANIDE, TOTAL
ASS	COOL (4 C)	WP27	ALACHLOR

MMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

IPLE COLLECTED BY : Bill Grisham

DRAFT

FIELD SHEET
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 94 ACTNO: ARD53 SAMNO: 058 QCC: F MEDIA: WATER PL: DONA, BOB

CTIVITY DES: MONSANTO, QUEENY PLANT REF LATITUDE:
LOCATION: ST. LOUIS MO PROJECT NUM: A60 PT: LONGITUDE: — — —

AMPLE DES: TRIP BLANK DATE TIME FROM REF PT
OCATION: _____ MO BEG: 3/8/94 16:00 EAST: ____
CASE/BATCH/SMO: ____/__/____ LAB: ___ END: __/__/__ __:__ NORTH: ____
TORET/AIRS NO: _____ DOWN: ____

NALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
-40 ML VIALS	HCL +COOL (4 C)	WV	WATER VOLATILES

OMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

MPLE COLLECTED BY : Bill Cusha